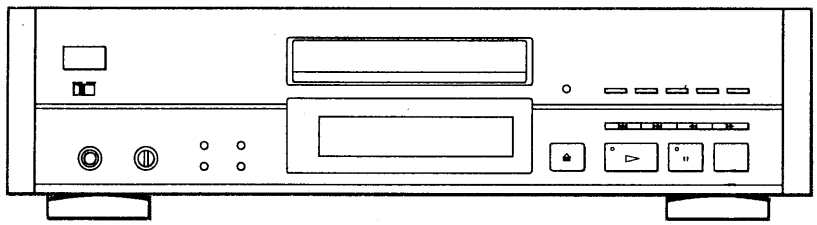
CDP-X505ES

SERVICE MANUAL

AEP Model
E Model
Australian Model



COMPACT disc DIGITAL AUDIO

Model Name Using Similar Mechanism	CDP-X559ES
CD Mechanism Type	CDM19C2-6G50 : (BLACK) CDM19D2-6G50 : (GOLD)
Optical Pick-up Block Type	BU-6G

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser
Wavelength	780-790 nm
Frequency response	2 Hz to 20 kHz ±0.3 dB
Signal-to-noise ratio	More than 118 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0017%
Channel separation	More than 110 dB

Outputs

LINE OUT (FIXED)	Output level 2 V (at 50 kilo-ohms) Load impedance over 10 kilo-ohms
LINE OUT (VARIABLE)	Output level max. 2 V (at 50 kilo-ohms) Load impedance over 50 kilo-ohms
DIGITAL OUT (OPTICAL)	Wave length 660 nm Output level –18 dBm
PHONES (stereo phone jack)	Output level max. 28 mW Load impedance 32 ohms

General

Power requirements	
Continental European model:	220 V – 230 V AC, 50/60 Hz
Australian model:	240 V AC, 50 Hz
Other country models:	110, 120, 220 or 240 V AC, 50/60 Hz
Power consumption	29 W
Dimensions (approx., including projections)	
CDP-X505ES	Australian model: 430 x 125 x 375 mm (w/h/d) (17 x 5 x 14 $^{7}/_{8}$ inches) Other country models: 470 x 125 x 375 mm (w/h/d) (18 $^{5}/_{8}$ x 5 x 14 $^{7}/_{8}$ inches)
Mass (approx.)	European model: 13.2 kg (29 lbs 2 oz) Australian model: 12.5 kg (27 lbs 9 oz) Other country models: 12.3 kg (27 lbs 2 oz)

Remote commander

Remote control system	Infrared control
Power requirements	3 V DC with two R6 (size AA) batteries
Dimensions (approx., including projections)	62 x 17 x 175 mm (w/h/d) (2 $^{1}/_{2}$ x $^{23}/_{32}$ x 7 inches)
Mass (approx.)	135 g (5 oz)

Design and specifications are subject to change without notice.

使用時は添付資料も参照のこと
Refer to the additional documents.

COMPACT DISC PLAYER

SONY®

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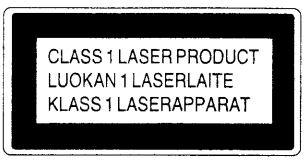
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

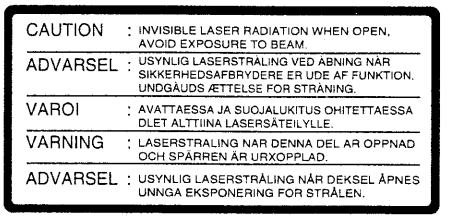


This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

The following caution label is located in the side of the unit.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅUDS ÆTTELSE FOR STRÅNING.
VAROI : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING : LASERSTRALING NAR DENNA DEL AR OPPNAD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGA EKSPONERING FOR STRÅLEN.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

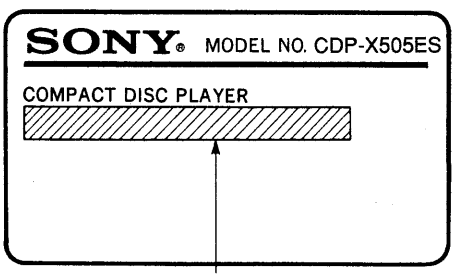
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

MODEL IDENTIFICATION

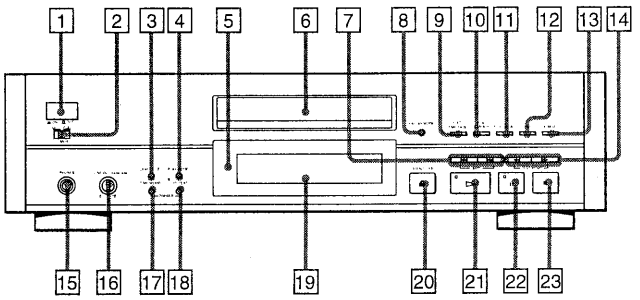
—Model Number Label—

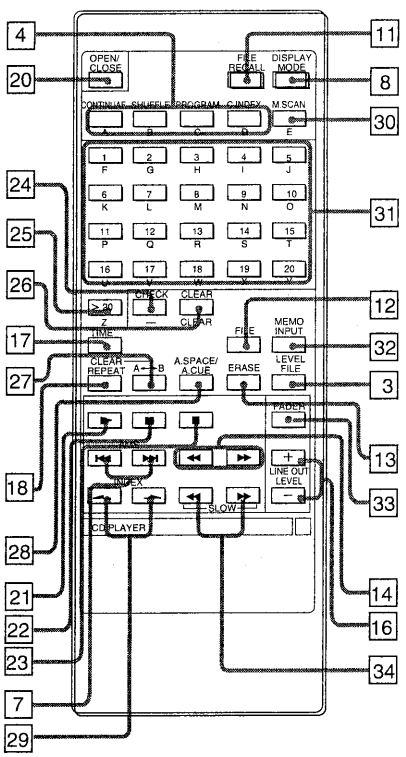


AEP, Germany model : AC : 220—230V, 50/60Hz 29W
Australian model : AC : 240V, 50Hz 29W
E, Saudi Arabia model : AC : 110, 120, 220 or 240V, 50/60Hz 29W

SECTION 1
GENERAL

This section is extracted from instruction manual.





Identifying the Parts

Refer to the pages indicated in parentheses for details.

Front Panel/ Remote Commander

1 POWER switch (18)
2 TIMER switch (92)
3 LEVEL FILE button (90)
4 PLAY MODE button
On the remote commander:
CONTINUE button (18)
SHUFFLE button (28)
PROGRAM button (34, 48)
C.INDEX button (76)
5 Remote sensor
6 Disc tray
7 I◄◄/►►I (AMS*) buttons (22)
8 DISPLAY MODE button (20)
9 EDIT/TIME FADE button (58, 64)
10 PEAK SEARCH button (66)
11 FILE RECALL button (84, 88)
12 FILE (custom file) button (70, 74, 76, 82, 86)
13 ERASE button (80, 84, 88)
14 ◄◄/►► (manual search) buttons (24)
15 PHONES jack (18)
16 LINE OUT/PHONE LEVEL control (18, 90)
(LINE OUT LEVEL +/– buttons on the remote commander)
17 TIME/MEMO button (20)
18 REPEAT button (40)
19 Display
20 ≙ OPEN/CLOSE button (18)
21 ► (play) button and indicator (18)
22 II (pause) button and indicator (18)
23 ■ (stop) button (18)
24 CHECK (program check) button (36)
25 >20 button (22)
26 CLEAR button (30, 32, 34, 36)
27 A↔B button (42)
28 A.SPACE/A.CUE button (26)
29 ←/→ INDEX buttons (24, 78)
30 M.SCAN button (38)
31 Numeric buttons (22)
32 MEMO INPUT button (72)
33 FADER button (44)
34 ◄◄/►► SLOW buttons (24)

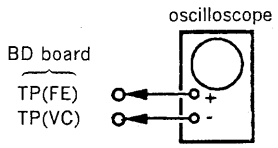
* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2
ELECTRICAL BLOCK CHECKING

Note :

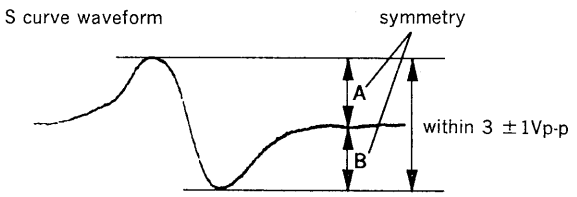
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) with lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

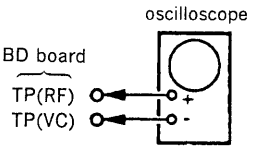


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

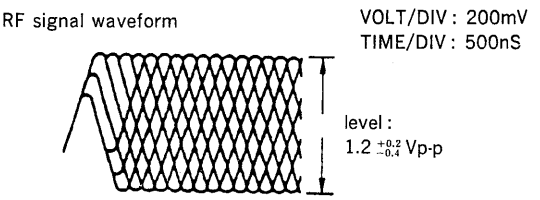


Procedure :

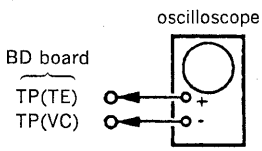
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

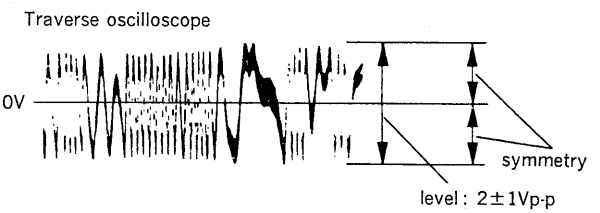


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wires.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

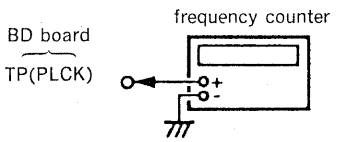


6. Remove the lead wires connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point TP (PLCK) with lead wire.

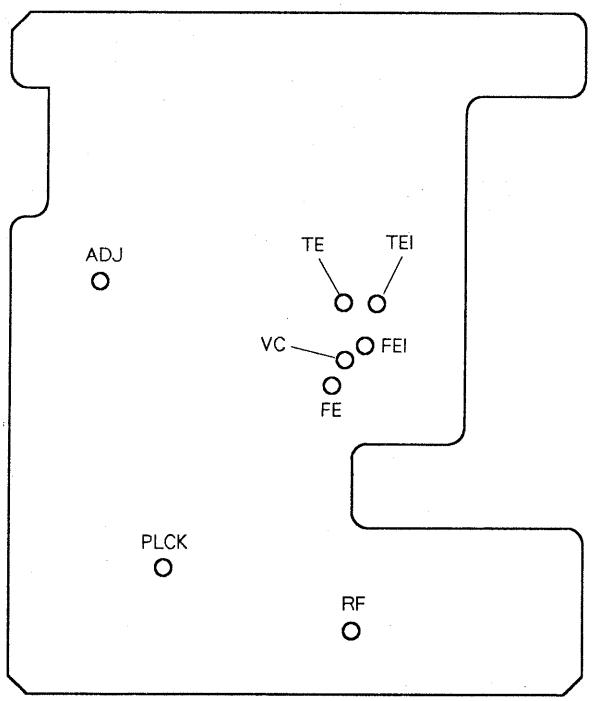


2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

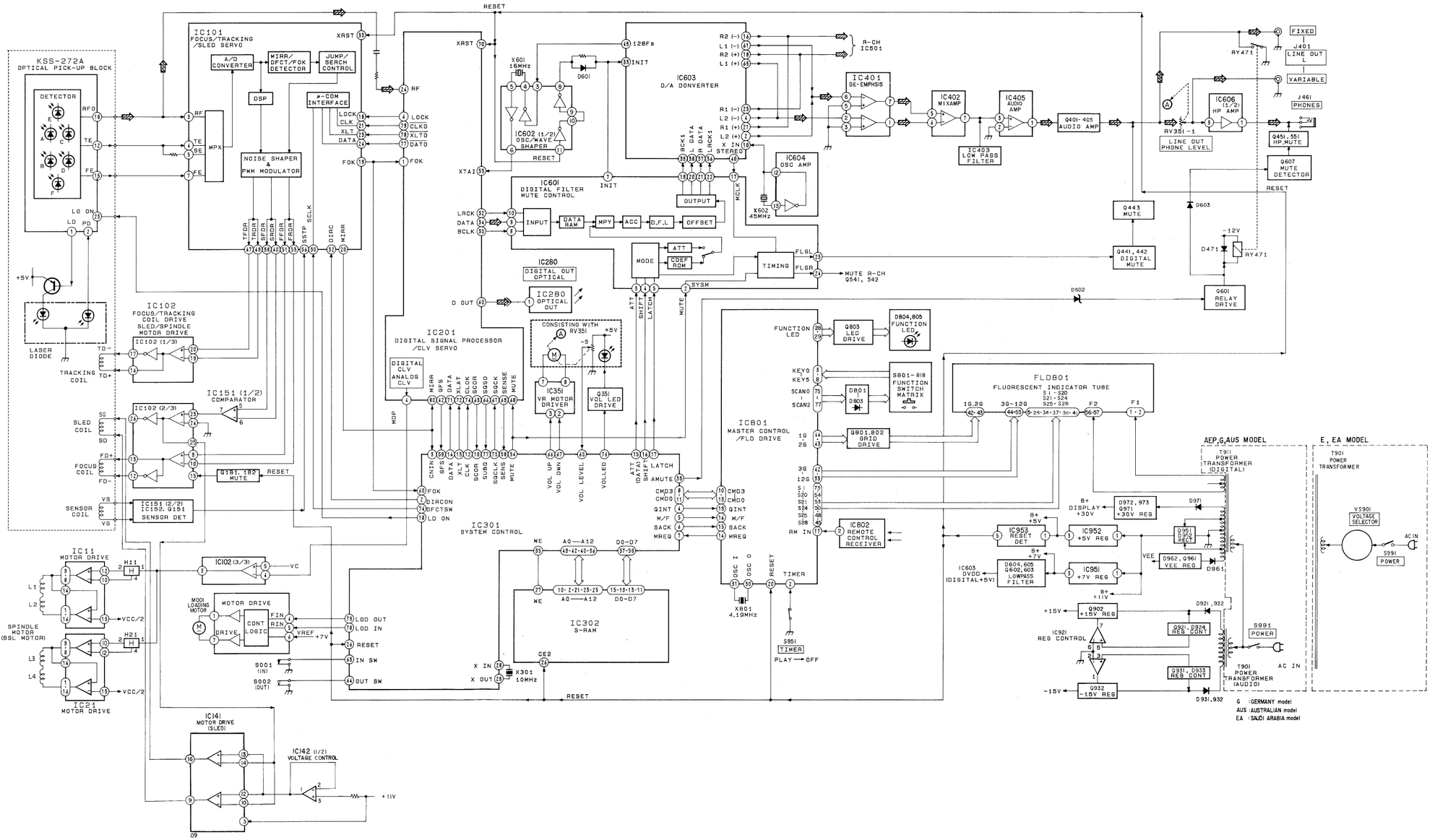
This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Check Point Location : BD board—side A—

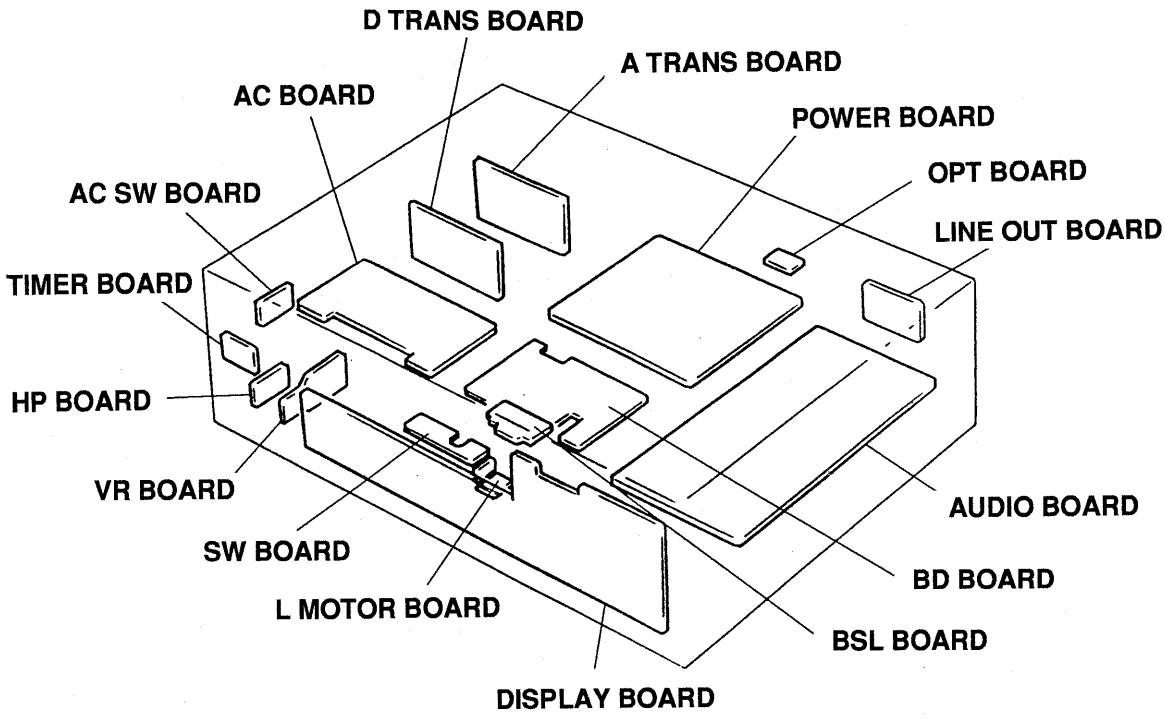


SECTION 3
DIAGRAMS

3-1. BLOCK DIAGRAM



3-2. CIRCUIT BOARDS LOCATION



3-3. PRINTED WIRING BOARDS — MAIN SECTION —

•See page 9 for Circuit Boards Location.

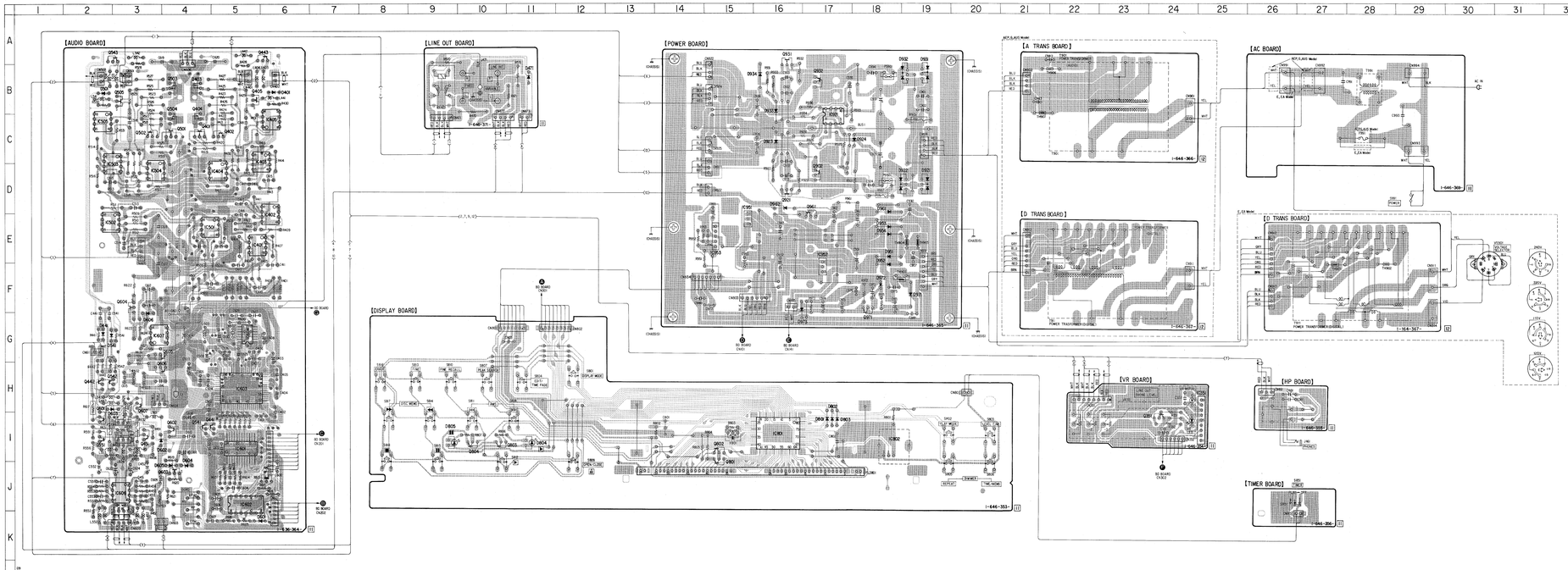
• Semiconductor Location

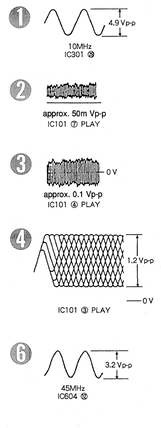
Ref.No.	Location	Ref.No.	Location	Ref.No.	Location
D401	B-6	IC351	I-25	Q451	I-3
D441	G-2	IC401	E-5	Q501	C-4
D471	B-11	IC402	E-6	Q502	C-3
D501	B-2	IC403	C-6	Q503	B-4
D541	G-2	IC404	D-5	Q504	C-4
D601	K-6	IC405	C-6	Q505	B-3
D602	I-3	IC501	E-4	Q541	I-4
D603	H-2	IC502	E-2	Q542	H-2
D604	J-4	IC503	C-3	Q543	A-3
D605	J-4	IC504	D-3	Q551	I-2
D606	G-3	IC505	C-2	Q601	I-2
D801	I-17	IC601	I-5	Q602	I-4
D802	I-17	IC602	J-5	Q603	J-4
D803	I-17	IC603	H-5	Q604	F-3
D804	I-11	IC604	G-5	Q605	G-3
D805	I-9	IC606	J-3	Q606	H-3
D921	D-19	IC607	G-3	Q607	H-3
D922	D-19	IC801	I-16	Q801	J-15
D923	C-16	IC802	I-18	Q802	I-15
D924	C-18	IC921	C-17	Q803	I-10
D931	B-19	IC951	E-15	Q804	I-10
D932	B-19	IC952	F-17	Q921	D-16
D933	B-16	IC953	E-15	Q922	D-17
D934	B-16			Q931	A-16
D951	E-18	Q351	I-24	Q932	B-17
D952	F-18	Q401	C-4	Q961	E-17
D953	E-18	Q402	C-5	Q971	F-18
D954	E-18	Q403	B-4		
D961	D-18	Q404	C-4		
D962	D-16	Q405	B-5		
D971	F-19	Q441	I-5		
D972	F-18	Q442	H-2		
D973	F-16	Q443	A-6		

Note:

- ⟜——: parts extracted from the components side.
- ○ : Through hole.
- ▒▒▒: Pattern on the side which is seen.
- ▒▒▒: Pattern of the rear side.

•AUS : Australian Model
•G : German Model
•EA : Saudi Arabia Model





REVISED

3-4. SCHEMATIC DIAGRAM — MAIN SECTION —

• See page 28 for Semiconductor Lead Layouts and 29, 30 for IC Block Diagrams.

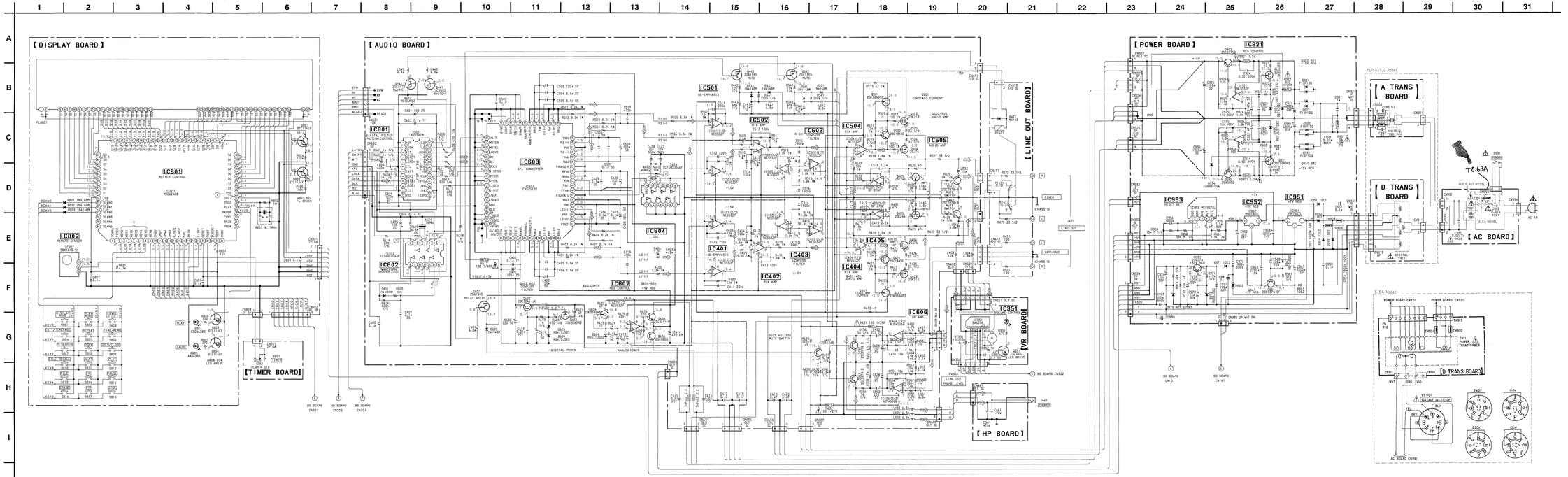
Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ■ : nonflammable resistor.
- ■ : fusible resistor.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- ——— : B+ Line
- ═══ : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : STOP ( ) : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path. ⇨ : CD ⇨ : digital out

•AUS : Australian Model
•G : GermanModel
•EA : Saudi Arabia Model



3-5. SCHEMATIC DIAGRAM — BD SECTION —

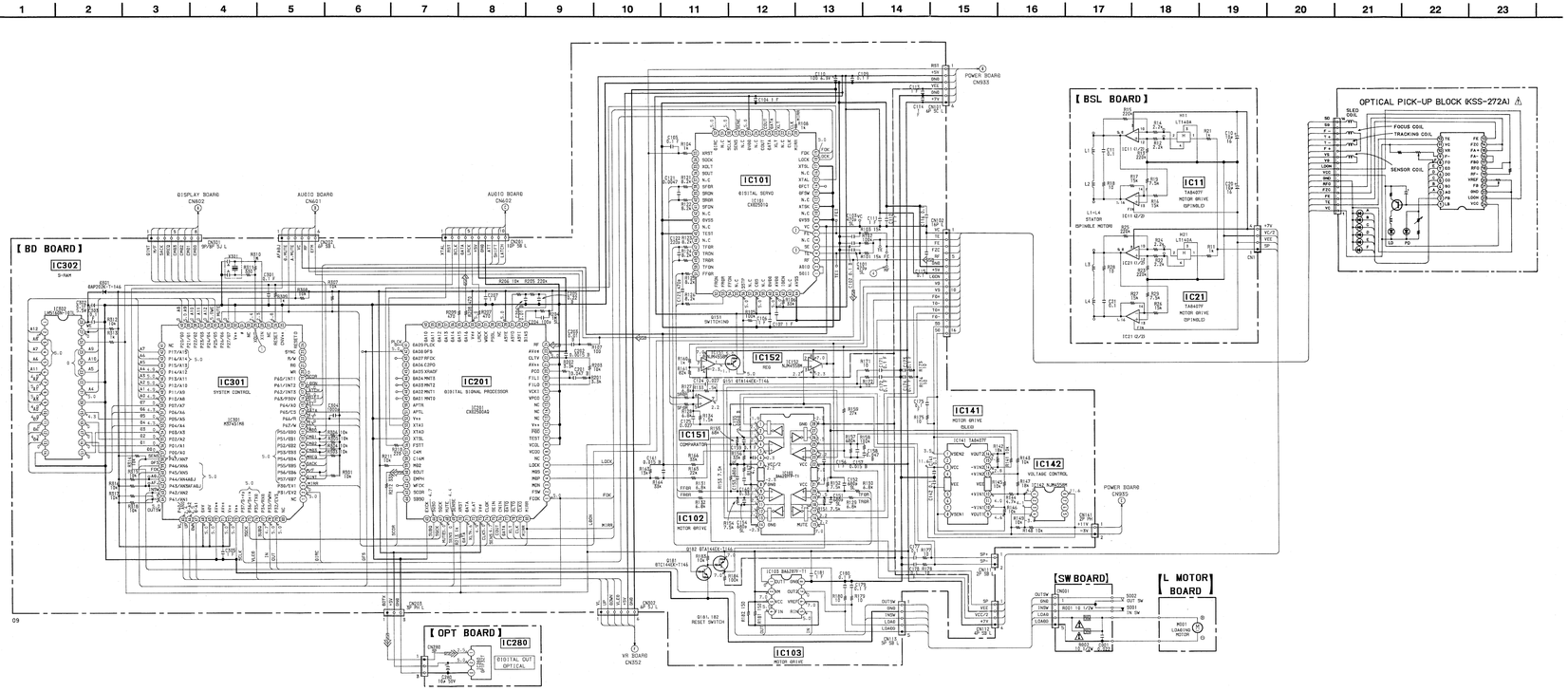
- See page 28 for Semiconductor Lead Layouts and 29, 30 for IC Block Diagrams.
- See page 14 for Waveform.

Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
- ⚠ : fusible resistor.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- ═══ : B+ Line
- ═══ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PLAY
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇒ : CD
  ⇒ : digital out



3-6. PRINTED WIRING BOARDS — BD SECTION —

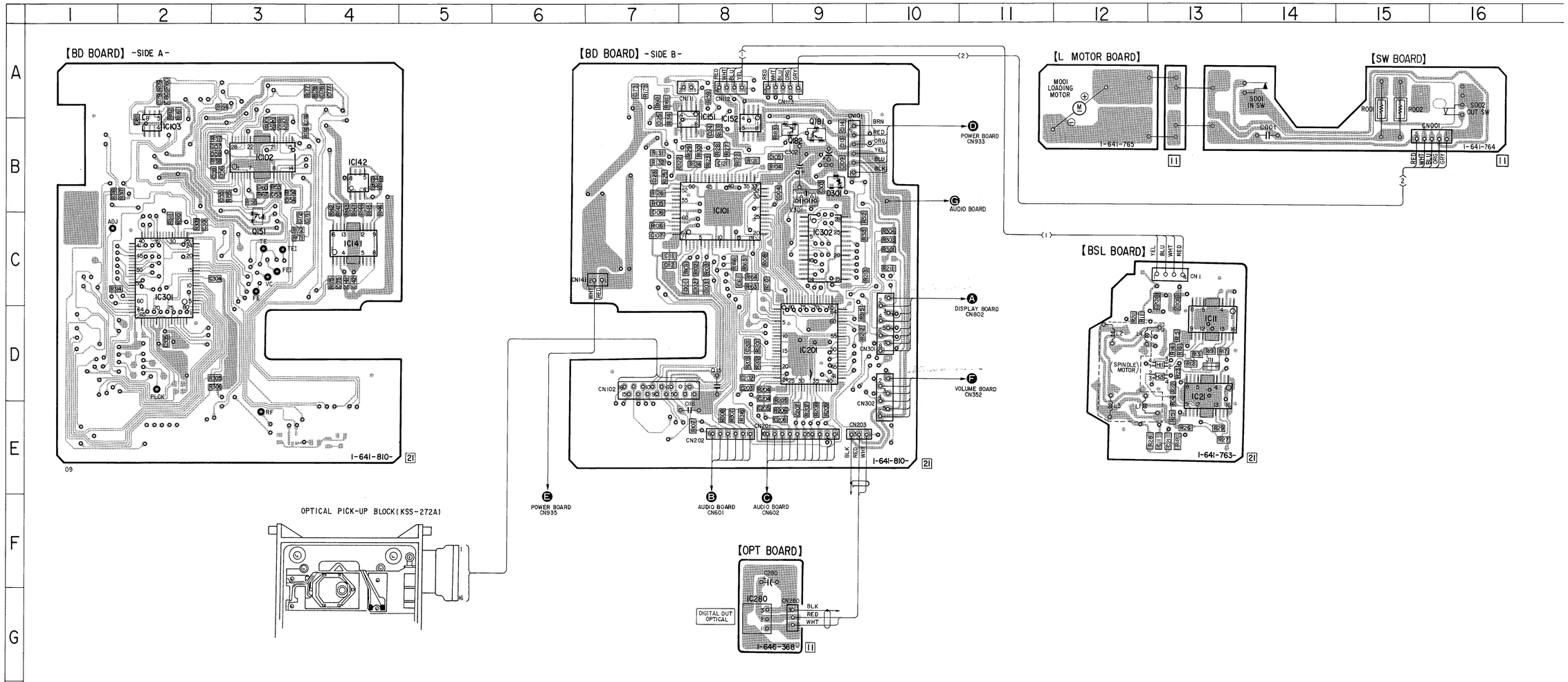
•See page 9 for Circuit Boards Location.

Note:

- ⟜—— : parts extracted from the components side.
- ○ : Through hole.
- ▒▒▒ : Pattern on the side which is seen.
- BSL Board is a two-layer print board, However, the patterns of rear side have not been included in the diagram.

• Semiconductor Location

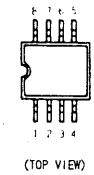
Ref.No.	Location
D301	B-9
IC101	C-8
IC102	B-3
IC103	B-2
IC141	C-4
IC142	B-4
IC151	B-8
IC152	B-8
IC201	D-9
IC280	G-8
IC301	C-2
IC302	C-9
Q151	C-3
Q181	B-9
Q182	B-9



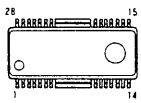
3-7. SEMICONDUCTOR LEAD LAYOUTS

BA6208

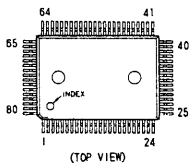
BA6287F



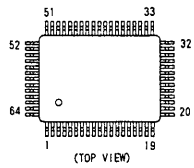
BA6297AFP



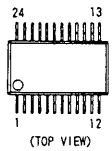
CXD2500AQ
MSC62408-045
M37451M8-228FP



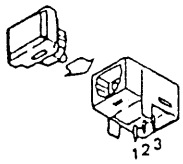
CXD2501Q



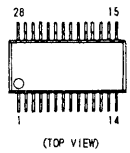
CXD2567M
CXD2562Q



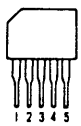
GP1F32T



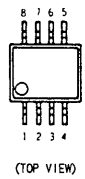
LH5160N-10N



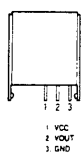
M5220P
M51957AL
M5F7807I
M5F7805



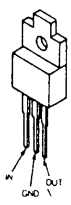
NJM4558M



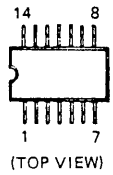
SBX1610-59



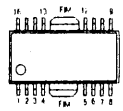
TA7805S
TA7807S



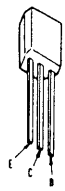
SN74HCU04N
TC74HCU04AF



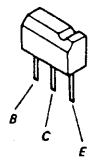
TA8407F(EL)



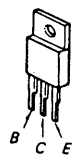
DTA144ES
DTC114ES



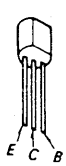
DTC144EK
DTC114EF



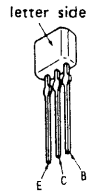
2SA985A-QP
2SB1370-EF
2SC2275A-QP
2SC3514



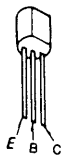
2SC1845-EA
2SC2878-AB



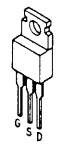
2SC3246-JK



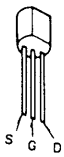
KSC1008



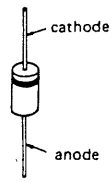
2SJ76
2SK213



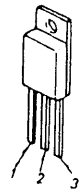
2SK30A-GR3
2SK246-BL

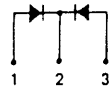


ERB83-004
1N4148M
10E2

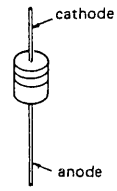


F10P10Q

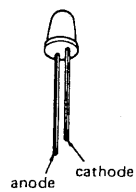




RD10JS-B2
RD13JS-B2
RD33JS-B2
RD4.7JS-B3
RD5.1JS-B2
RD7.5JS-B2

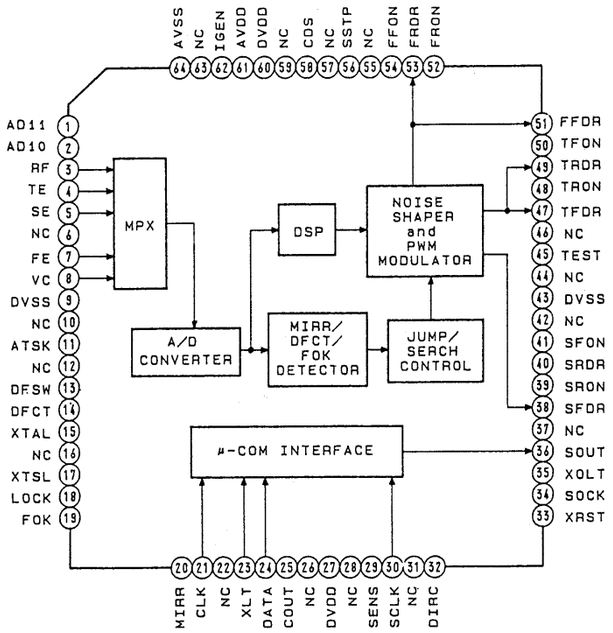


EAA5638S
EBG5638S

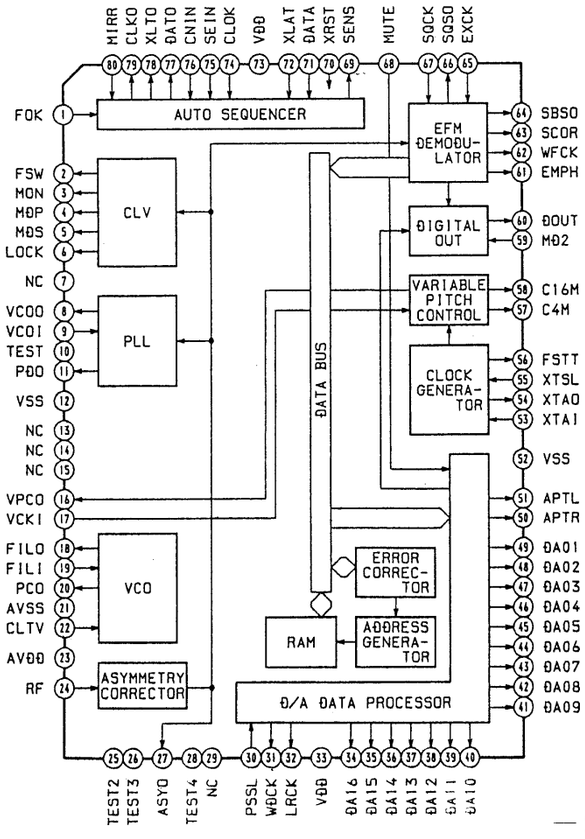


3-8. IC BLOCK DIAGRAM

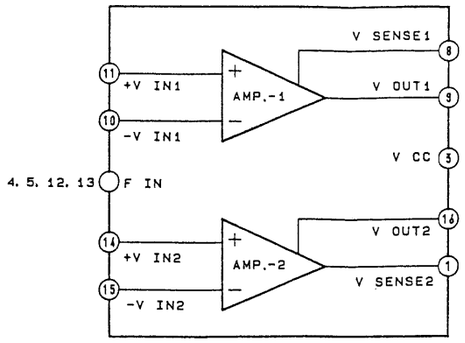
IC101 CXD2501Q


AVSS NC IGEN AVDD DVDD NC COS NC SSTP NC FFON FRDR FRON
AD11 AD10 RF TE SE NC FE VC DVSS NC ATSK NC DFSW DFCT XTAL NC XTSL LOCK FOK
MPX
A/D CONVERTER
DSP
NOISE SHAPER and PWM MODULATOR
MIRR/ DFCT/ FOK DETECTOR
JUMP/ SEARCH CONTROL
μ-COM INTERFACE
FFDR TFON TRDR TRON TFDR NC TEST NC DVSS NC SFON SRDR SRON SFDR NC SOUT XOLT SOCK XRST
MIRR CLK NC XLT DATA COUT NC DVDD NC SENS SCLK NC DIRC

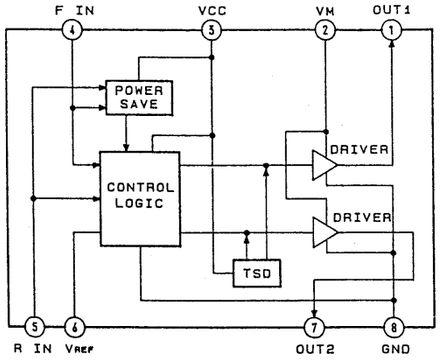
IC201 CXD2500AQ


MIRR CLKO XLTO DATO CNIN SEIN CLOK VDD XLAT DATA XRST SENS MUTE SQCK SQSO EXCK
FOK
AUTO SEQUENCER
EFM DEMODU-LATOR
FSW MON MDP MDS LOCK NC VCOO VCOI TEST PDO VSS NC NC NC VPCO VCKI FILO FILI PCO AVSS CLTV AVDD RF
CLV
PLL
VCO
DATA BUS
DIGITAL OUT
VARIABLE PITCH CONTROL
CLOCK GENERA-TOR
ERROR CORREC-TOR
RAM
ADDRESS GENERA-TOR
ASYMMETRY CORRECTOR
D/A DATA PROCESSOR
SBSO SCOR WFCK EMPH DOUT MD2 C16M C4M FSTT XTSL XTAO XTAI VSS APTL APTR DA01 DA02 DA03 DA04 DA05 DA06 DA07 DA08 DA09
TEST2 TEST3 ASYO TEST4 NC PSSL WDCK LRCK VDD DA16 DA15 DA14 DA13 DA12 DA11 DA10

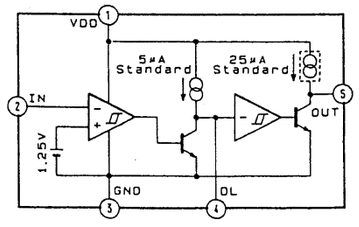
IC11, 21, 141 TA8407F



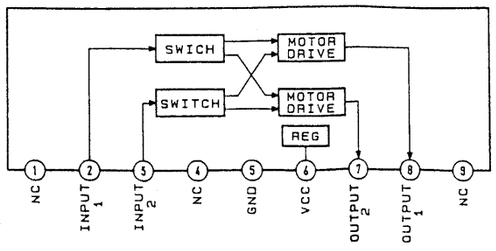
IC103 BA6287F-T1



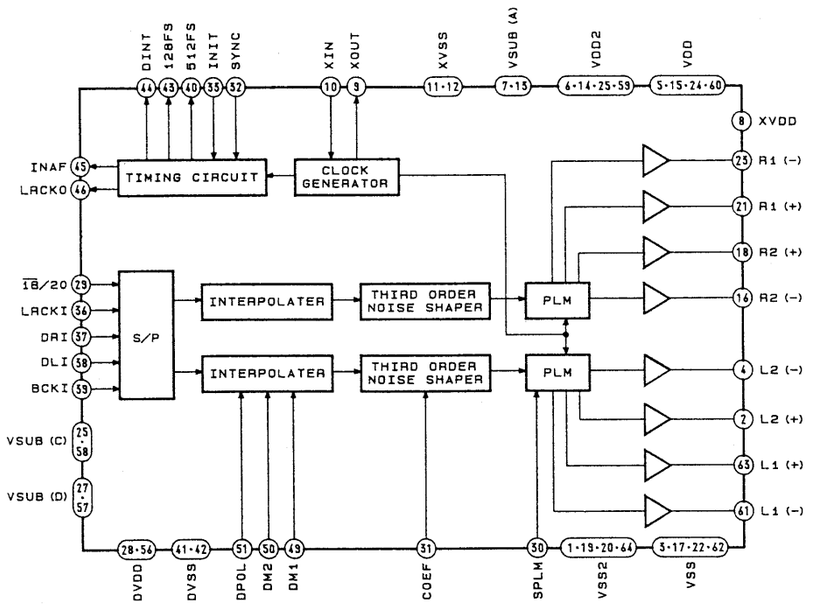
IC953 M51957AL



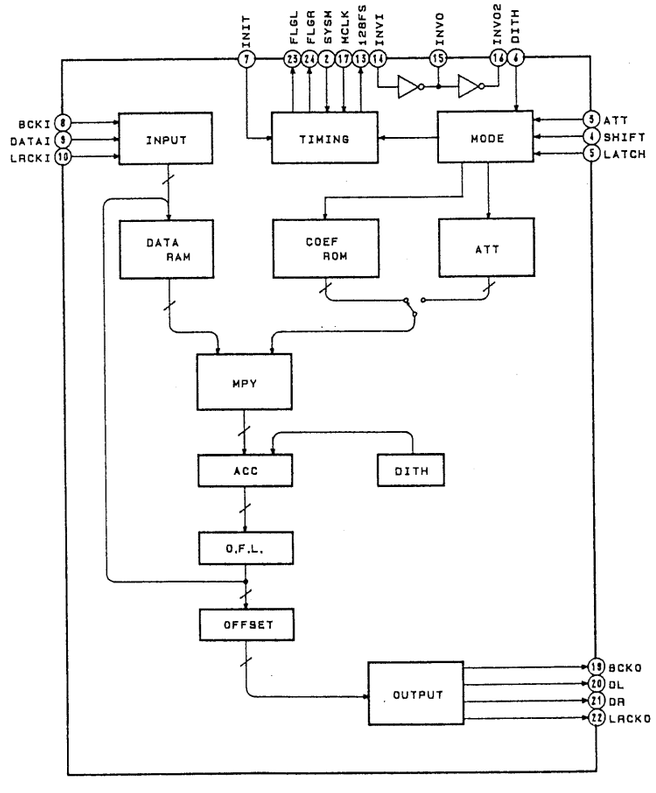
IC351 BA6208



IC603 CXD2562Q


DINT 128FS 512FS INIT SYNC XIN XOUT XVSS VSUB (A) VDD2 VDD
XVDD
INAF LACKO
TIMING CIRCUIT
CLOCK GENERATOR
R1 (-) R1 (+) R2 (+) R2 (-) L2 (-) L2 (+) L1 (+) L1 (-)
16/20 LACKI DRI DLI BCKI
S/P
INTERPOLATER
THIRD ORDER NOISE SHAPER
PLM
INTERPOLATER
THIRD ORDER NOISE SHAPER
PLM
VSUB (C) VSUB (D)
DVDD DVSS DPOL DM2 DM1 COEF SPLM VSS2 VSS

IC601 CXD2567M



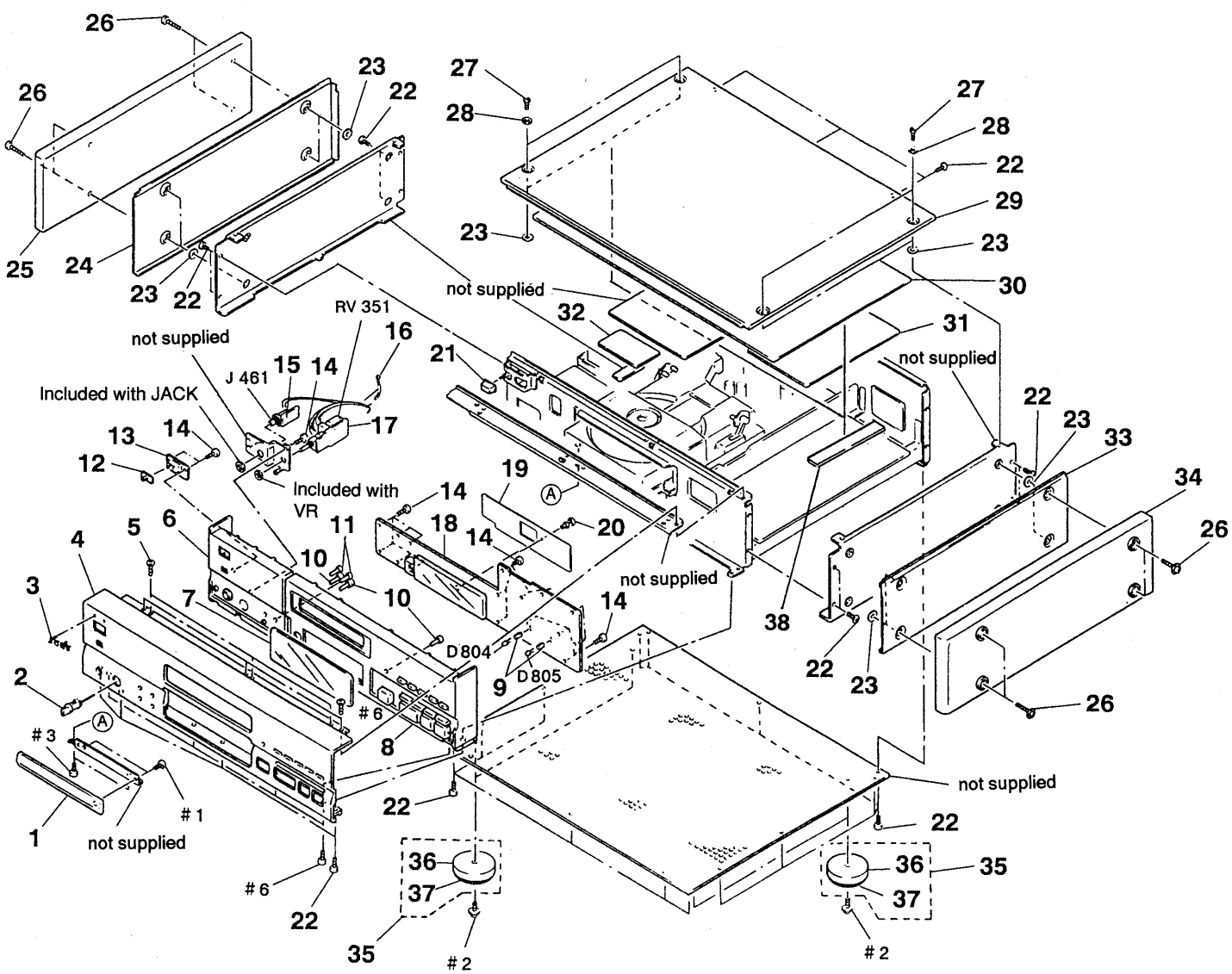
SECTION 4
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- AUS : Australian model
- EA : Saudi Arabia model
- G : German model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

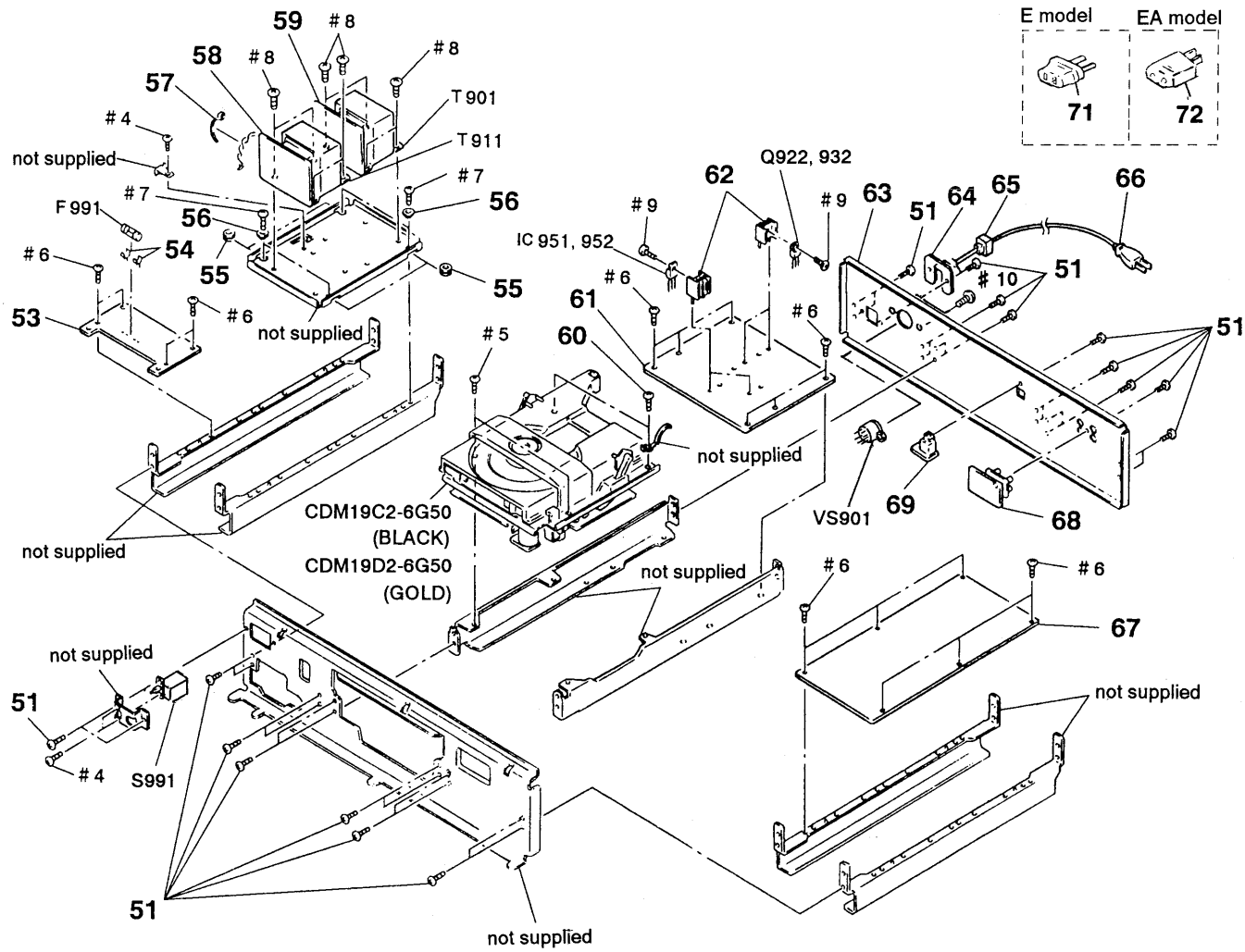
4-1. FRONT PANEL AND CABINET ASSEMBLIES



Ref. No.	Part No.	Description	Remark
1	4-955-072-01	PANEL, LOADING (BLACK:AEP, G, E, EA, AUS)	
1	4-955-072-11	PANEL, LOADING (GOLD:AEP, G)	
2	A-4604-901-A	KNOB (HP) ASSY (BLACK:AEP, G, E, EA, AUS)	
2	A-4604-952-B	KNOB (VOL) ASSY (GOLD:AEP, G)	
3	4-942-568-01	EMBLEM (NO. 5), SONY (BLACK:AEP, G, E, EA, AUS)	
3	4-942-568-11	EMBLEM (NO. 5), SONY (GOLD:AEP, G)	
4	4-955-053-31	PANEL, FRONT (BLACK:AEP, E, EA, G)	
4	4-955-053-41	PANEL, FRONT (GOLD:AEP, G)	
4	4-955-053-21	PANEL, FRONT (AUS)	
5	3-703-685-21	SCREW (+BV 3X8)	
6	4-955-058-01	PANEL (BASE L) (BLACK:AEP, G, E, EA, AUS)	
6	4-955-058-11	PANEL (BASE L) (GOLD:AEP, G)	
7	4-955-059-01	PLATE, INDICATION	
8	X-4943-005-1	BASE (R) ASSY, PANEL (GOLD)	
8	X-4943-006-1	BASE (R) ASSY, PANEL (BLACK)	
* 9	4-923-532-01	SPACER, LED	
10	4-955-075-01	BUTTON (LEVEL-F) (BLACK:AEP, G, E, EA, AUS)	
10	4-955-075-11	BUTTON (LEVEL-F) (GOLD:AEP, G)	
11	4-955-077-01	BUTTON (TIME/M) (BLACK:AEP, G, E, EA, AUS)	
11	4-955-077-11	BUTTON (TIME/M) (GOLD:AEP, G)	
12	4-922-518-11	KNOB (TIMER) (BLACK:AEP, G, E, EA, AUS)	
12	4-922-518-62	KNOB (TIMER) (GOLD:AEP, G)	
* 13	1-646-356-11	TIMER BOARD	
14	4-951-620-01	SCREW (2.6X8), +BVTP	
* 15	1-646-355-11	HP BOARD	
16	3-655-653-21	BAND (TAITON), BINDING	
* 17	1-646-354-11	VR BOARD	
* 18	A-4649-423-A	DISP BOARD, COMPLETE	
* 19	4-955-888-01	COVER (CABLE)	
20	3-531-576-11	RIVET	
21	4-923-520-41	KNOB, POWER (GOLD:AEP, G)	
21	4-923-520-51	KNOB, POWER (BLACK:AEP, G, E, EA, AUS)	
22	4-929-074-01	SCREW (3X8)	
23	4-935-917-01	WASHER (CASE)	
24	4-925-368-11	CASE (LEFT) (BLACK:AEP, G, E, EA, AUS)	
24	4-925-368-21	CASE (LEFT) (GOLD:AEP, G)	
25	X-4928-001-1	PLATE (LEFT) ASSY, SIDE (E, EA)	
25	X-4941-168-2	PLATE(L) ASSY, SIDE, ORNAMENTAL (GOLD:AEP, G)	
25	X-4941-204-1	PRATE (L) ASSY, ORNAMENTAL SIDE (BLACK:AEP, G)	
26	4-885-979-11	SCREW (4X25) (EXCEPT FOR AUS)	
26	4-847-802-00	SCREW (AUS)	
27	4-924-242-01	SCREW (M3X6), FLAT HEAD (GOLD:AEP, G)	
27	4-924-242-11	SCREW (M3X6), FLAT HEAD (BLACK:AEP, G, E, EA, AUS)	
28	4-928-025-11	ESCUTCHEON (TOP PLATE) (BLACK:AEP, G, E, EA, AUS)	
28	4-928-025-41	ESCUTCHEON (TOP PLATE) (GOLD:AEP, G)	
29	4-925-367-21	CASE (TOP PLATE) (BLACK:AEP, G, E, EA, AUS)	
29	4-925-367-31	CASE (TOP PLATE) (GOLD:AEP, G)	
30	A-4675-309-A	REINFORCEMENT (TOP PLATE) ASSY	
* 31	4-913-189-01	FELT (B), ACOUSTIC ABSORBENT	
* 32	4-923-563-01	CUSHION	
33	4-925-369-11	CASE (RIGHT) (BLACK:AEP, E, EA, G)	
33	4-925-369-21	CASE (RIGHT) (GOLD:AEP, G)	
33	4-925-369-11	CASE (RIGHT) (AUS)	
34	X-4928-002-1	PLATE (RIGHT) ASSY, SIDE (E, EA)	
34	X-4941-169-2	PLATE(R) ASSY, SIDE, ORNAMENTAL (GOLD:AEP, G)	
34	X-4941-205-1	PRATE (R) ASSY, ORNAMENTAL SIDE (BLACK:AEP, G)	
35	X-4922-549-1	FOOT ASSY (BLACK:AEP, G, E, EA, AUS)	
35	X-4941-711-1	FOOT ASSY (GOLD:AEP, G)	
36	4-922-543-01	FOOT (BLACK:AEP, G, E, EA, AUS)	
* 37	4-925-370-02	BASE, FOOT (BLACK:AEP, G)	

Ref. No.	Part No.	Description	Remark
38	4-389-350-01	CUSHION, CRT	
D804	8-719-913-49	LED EBG5638S (▶)	
D805	8-719-913-47	LED EAA5638S (❚❚)	
J461	1-568-519-31	JACK, LARGE TYPE (BLACK) (PHONES)	
J461	1-568-519-61	JACK, LARGE TYPE (GOLD) (PHONES)	
RV351	1-241-321-11	RES, VAR, CARBON 10KX3 (LINE OUT/PHONE LEVEL)	

4-2. CHASSIS SECTION

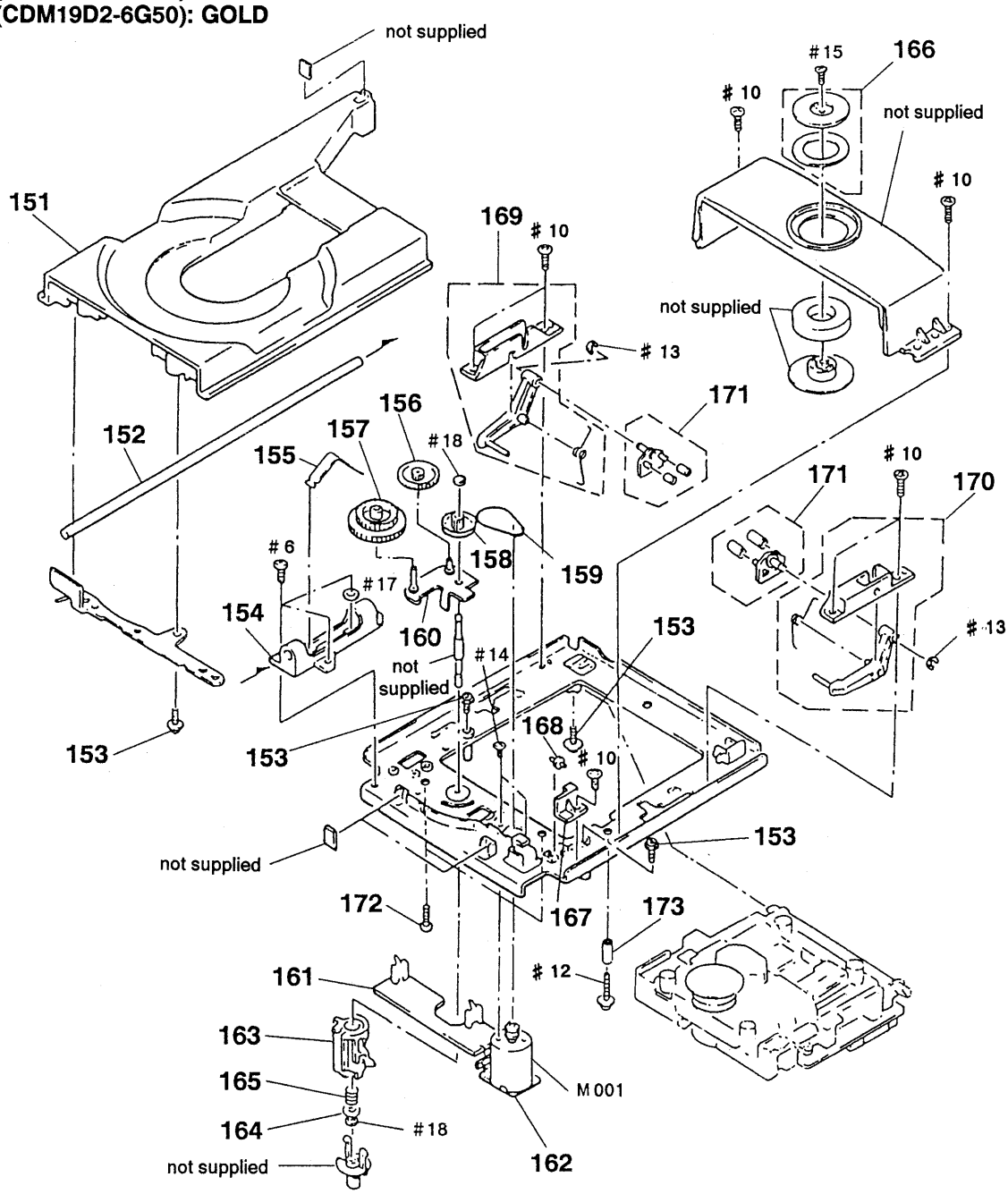


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	4-929-074-01	SCREW (3X8)	
* 53	1-646-369-11	AC BOARD	
54	1-533-233-11	HOLDER, FUSE (AEP, G, AUS)	
* 55	4-888-798-00	BUSHING, RUBBER	
56	4-928-032-01	COLLAR (A)	
57	3-655-653-21	BAND (TAITON), BINDING	
* 58	1-646-367-11	D. TRANS BOARD	
* 59	1-646-366-11	A. TRANS BOARD (AEP, G, AUS)	
60	3-703-685-21	SCREW (+BV 3X8)	
* 61	A-4649-709-A	POWER BOARD, COMPLETE	
* 62	4-363-146-00	HEAT SINK, V. OUT	
* 63	4-955-052-22	PANEL, BACK (BROWN) (GOLD:AEP, G)	
* 63	4-955-052-32	PANEL, BACK (BLACK) (BLACK:AEP, G)	
* 63	4-955-052-41	PANEL, BACK (BLACK) (E, EA)	
* 63	4-955-052-52	PANEL, BACK (BLACK) (AUS)	
* 64	4-923-873-01	BRACKET, CORD STOPPER (BLACK:AEP, G, E, EA, AUS)	
* 64	4-923-873-11	BRACKET, CORD STOPPER (DARK GRAY) (GOLD:AEP, G)	
* 65	3-703-244-00	BUSHING (2104), CORD	

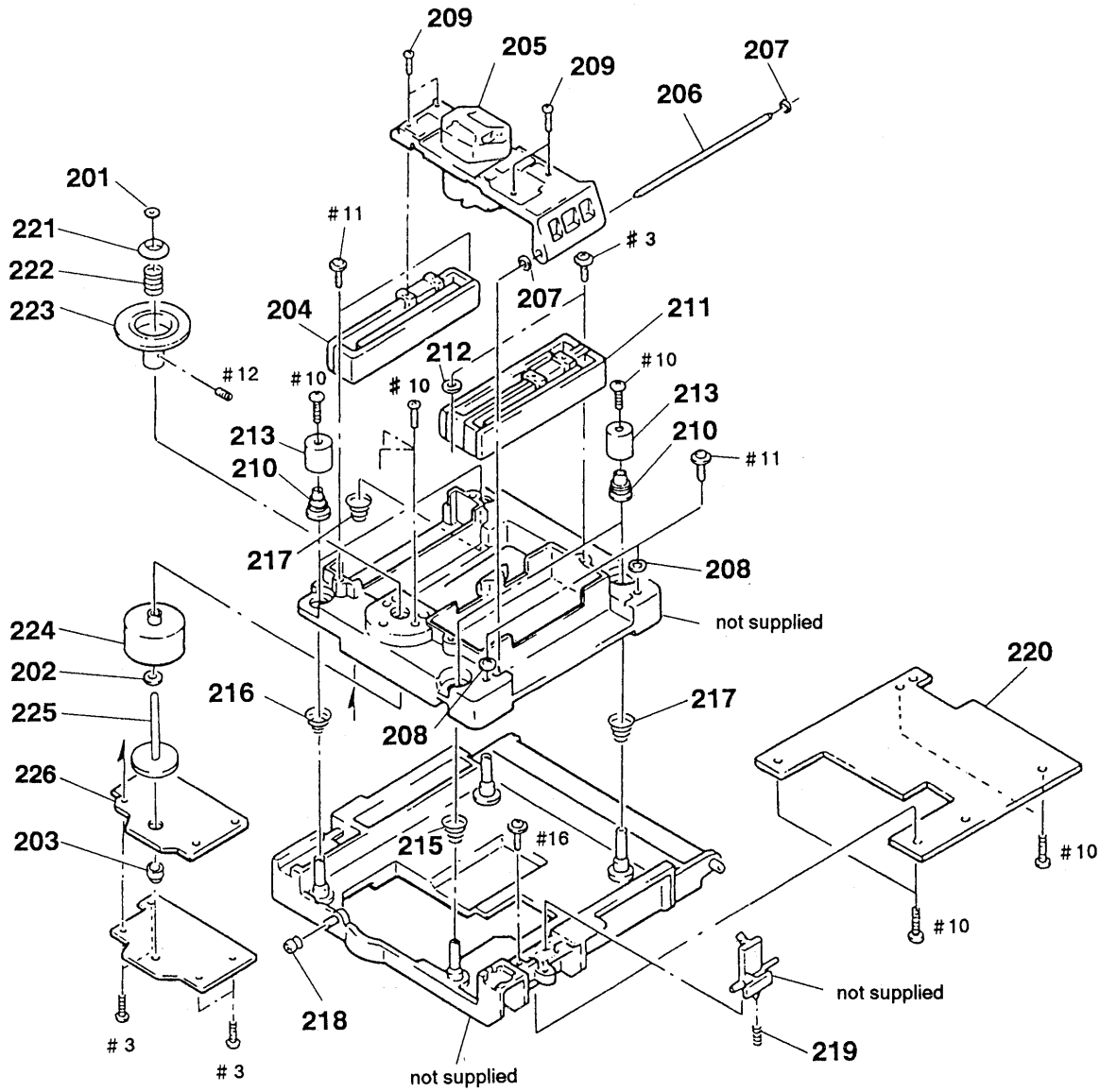
Ref. No.	Part No.	Description	Remark
⚠66	1-558-181-21	CORD, POWER (E, EA)	
⚠66	1-558-568-21	CORD, POWER (AEP, G)	
⚠66	1-751-060-11	CORD, POWER (AUS)	
* 67	A-4649-410-A	AUDIO BOARD, COMPLETE	
* 68	1-646-371-11	LINE BOARD	
* 69	1-646-368-11	OPT BOARD	
⚠71	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
⚠72	1-569-008-11	ADAPTER, CONVERSION 2P (EA)	
⚠F991	1-532-284-00	FUSE, TIME-LAG (0.63A) (AEP, AUS, G)	
IC951	8-759-071-48	IC M5F7807L	
IC952	8-759-231-53	IC M5F7805	
Q922	8-729-107-53	TRANSISTOR 2SC2275A	
Q932	8-729-141-10	TRANSISTOR 2SA985A	
⚠T901	1-423-461-11	TRANSFORMER, POWER (AUDIO) (AEP, AUS, G)	
⚠T911	1-423-459-11	TRANSFORMER, POWER (E, EA)	
⚠T911	1-423-460-11	TRANSFORMER, POWER (DIGITAL) (AEP, AUS, G)	
⚠VS901	1-526-576-51	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E, EA)	
⚠S991	1-572-267-21	SWITCH, PUSH (AC POWER) (1 KEY)	

4-3. CD MECHANISM BLOCK SECTION (CDM19C2-6G50): BLACK (CDM19D2-6G50): GOLD



Ref. No.	Part No.	Description	Remark
151	4-948-353-01	TABLE, DISC (BLACK)	
151	4-948-353-11	TABLE, DISC (GOLD)	
* 152	4-948-368-01	BAR (MAIN), GUIDE	
* 153	4-917-583-21	BRACKET, YOKE	
* 154	4-948-360-01	BEARING, LOADING	
* 155	4-927-648-01	SLIDER (GROUND)	
156	4-927-628-01	GEAR (C)	
157	4-927-620-01	GEAR (P)	
158	4-929-724-01	PULLEY (B)	
159	4-927-649-01	BELT	
160	X-4927-608-1	ARM ASSY, SWING	
* 161	1-641-764-11	SW BOARD	
* 162	1-641-765-11	L. MOTOR BOARD	
* 163	4-948-371-01	CAM (BU)	
164	4-927-654-01	WASHER (LIMITER)	
165	3-659-338-00	SPRING, COMPRESSION	
166	A-4660-292-A	MAGNET ASSY	
* 167	4-948-361-01	GUIDE, LOADING	
168	4-927-627-01	ROLLER (S, G)	
169	A-4660-258-A	LEVER (L) (STABLE LOCK) ASSY	
170	A-4660-259-A	LEVER (R) (STABLE LOCK) ASSY	
171	X-4942-969-2	DAMPER (STABLE LOCK 2) ASSY	
172	3-703-685-21	SCREW (+BV 3X8)	
173	3-654-603-00	SPACER	
M001	A-4604-347-A	MOTOR (L) ASSY	

4-4. BASE UNIT SECTION (BU-6G)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
201	4-947-420-01	RING (DIA 2.53), RETAINING	
202	3-701-439-11	WASHER (φ3)	
203	4-943-342-01	BEARING	
204	A-4638-084-A	SENSOR ASSY, SPEED	
⚠205	8-848-244-11	DIVICE, OPTICAL KSS-272A	
* 206	4-910-431-01	SHIFT, SLIDE	
* 207	4-917-582-01	CUSHION, SLIDE	
208	4-927-318-01	WASHER	
209	3-318-203-61	SCREW (B1.7X4), TAPPING	
* 210	4-917-584-11	INSULATOR	
211	A-4608-335-A	MOTOR ASSY, LINEAR	
212	4-927-669-01	WASHER (BU)	
213	4-927-634-01	HOLDER (SP)	
215	4-948-375-01	SPRING (F), COIL	
216	4-917-573-01	SPRING (E), COIL	
217	4-917-571-01	SPRING (A), COIL	
218	4-927-631-01	ROLLER (L)	
219	3-305-423-00	SPRING, COMPRESSION	
* 220	A-4649-489-A	BD BOARD COMPLETE	
221	4-948-381-01	CAP, CENTERING	
222	4-908-213-01	SPRING, COMPRESSION	
223	A-4660-056-A	PULLEY ASSY, DISK	
224	4-948-382-02	BEARING (SPINDLE)	
* 225	A-4660-055-B	PULLEY ASSY, MOTOR	
* 226	A-4617-993-A	BSL BOARD, COMPLETE	

A. TRANS

AC **AUDIO**

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- AUS : Australian model
- EA : Saudi Arabia model
- G : German model

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Hardware (# mark) list is given in the last of this parts list.

Ref.No.	Part No.	Description			Remark
*	1-646-366-11	A. TRANS BOARD (AEP, G, AUS)			
		**********			
*	1-696-874-21	LEAD (WITH CONNECTOR) (AEP, G, AUS)			
*	1-696-875-11	LEAD (WITH CONNECTOR) (AEP, G, AUS)			
		< CAPACITOR >			
C982	1-106-343-00	MYLAR	1000PF	5% 200V	(AEP, G, AUS)
C983	1-106-343-00	MYLAR	1000PF	5% 200V	(AEP, G, AUS)
		< THERMISTOR >			
TH906	1-808-065-11	THERMISTOR, POSITIVE (AEP, G, AUS)			
TH907	1-808-065-11	THERMISTOR, POSITIVE (AEP, G, AUS)			
**********					
*	1-646-369-11	AC BOARD			
		********			
	1-533-233-11	HOLDER, FUSE (AEP, G, AUS)			
		< CAPACITOR >			
⚠C991	1-162-599-12	CERAMIC	0.0047uF	20% 400V	
⚠C993	1-161-744-00	CERAMIC	0.01uF	400V	
		< CONNECTOR >			
CN991	1-564-321-00	PIN, CONNECTOR 2P			
CN992	1-564-321-00	PIN, CONNECTOR 2P (AEP, G, AUS)			
CN993	1-564-321-00	PIN, CONNECTOR 2P			
* CN994	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P			
		< TRASFORMER >			
⚠T991	1-421-915-11	COIL, LINE FILTER			
**********					
*	A-4649-410-A	AUDIO BOARD, COMPLETE			
		**********			
		< BUS >			
* BUS1	1-580-302-11	BUS BAR 4P			
* BUS2	1-580-302-11	BUS BAR 4P			
* BUS3	1-691-279-11	BUS BAR 5P			

Ref.No.	Part No.	Description			Remark
		< CAPACITOR >			
C401	1-126-023-11	ELECT	100uF	20% 25V	
C402	1-136-165-00	FILM	0.1uF	5% 50V	
C403	1-126-052-11	ELECT	100uF	20% 50V	
C404	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C405	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C406	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C407	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C408	1-126-052-11	ELECT	100uF	20% 50V	
C410	1-136-812-11	FILM	470PF	5% 100V	
C411	1-136-810-11	FILM	220PF	5% 100V	
C412	1-136-810-11	FILM	220PF	5% 100V	
C413	1-136-808-11	FILM	100PF	5% 100V	
C414	1-136-808-11	FILM	100PF	5% 100V	
C415	1-136-192-11	FILM	0.0018uF	2% 100V	
C416	1-136-192-11	FILM	0.0018uF	2% 100V	
C417	1-136-192-11	FILM	0.0018uF	2% 100V	
C418	1-104-646-91	CERAMIC	2.2uF	20% 50V	
C441	1-136-165-00	FILM	0.1uF	5% 50V	
C451	1-162-199-31	CERAMIC	10PF	5% 50V	
C452	1-126-024-11	ELECT	220uF	20% 25V	
C453	1-162-199-31	CERAMIC	10PF	5% 50V	
C502	1-136-165-00	FILM	0.1uF	5% 50V	
C503	1-126-052-11	ELECT	100uF	20% 50V	
C504	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C505	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C506	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C507	1-162-806-11	CERAMIC	0.1uF	10% 50V	
C508	1-126-052-11	ELECT	100uF	20% 50V	
C510	1-136-812-11	FILM	470PF	5% 100V	
C511	1-136-810-11	FILM	220PF	5% 100V	
C512	1-136-810-11	FILM	220PF	5% 100V	
C513	1-136-808-11	FILM	100PF	5% 100V	
C514	1-136-808-11	FILM	100PF	5% 100V	
C515	1-136-192-11	FILM	0.0018uF	2% 100V	
C516	1-136-192-11	FILM	0.0018uF	2% 100V	
C517	1-136-192-11	FILM	0.0018uF	2% 100V	
C518	1-104-646-91	CERAMIC	2.2uF	20% 50V	
C541	1-136-165-00	FILM	0.1uF	5% 50V	
C551	1-162-199-31	CERAMIC	10PF	5% 50V	
C552	1-126-024-11	ELECT	220uF	20% 25V	
C553	1-162-199-31	CERAMIC	10PF	5% 50V	
C600	1-164-159-11	CERAMIC	0.1uF	50V	

Ref.No.	Part No.	Description				Remark
C601	1-126-023-11	ELECT	100uF	20%	25V	
C602	1-136-165-00	FILM	0.1uF	5%	50V	
C603	1-162-290-31	CERAMIC	470PF	10%	50V	
C604	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C605	1-126-023-11	ELECT	100uF	20%	25V	
C606	1-136-165-00	FILM	0.1uF	5%	50V	
C607	1-136-165-00	FILM	0.1uF	5%	50V	
C608	1-126-053-11	ELECT	220uF	20%	50V	
C610	1-107-169-00	MICA	100PF	5%	500V	
C611	1-126-051-11	ELECT	47uF	20%	50V	
C612	1-126-051-11	ELECT	47uF	20%	50V	
C613	1-162-806-11	CERAMIC	0.1uF	10%	50V	
C614	1-126-066-11	ELECT	470uF	20%	63V	
C615	1-130-483-00	MYLAR	0.01uF	5%	50V	
C616	1-130-483-00	MYLAR	0.01uF	5%	50V	
C617	1-137-506-11	FILM	0.47uF	10%	63V	
C618	1-137-506-11	FILM	0.47uF	10%	63V	
C619	1-137-506-11	FILM	0.47uF	10%	63V	
C620	1-137-506-11	FILM	0.47uF	10%	63V	
C623	1-126-023-11	ELECT	100uF	20%	25V	
C624	1-126-023-11	ELECT	100uF	20%	25V	
C627	1-107-202-00	MICA	10PF	5%	500V	
C628	1-107-202-00	MICA	10PF	5%	500V	
C629	1-162-806-11	CERAMIC	0.1uF	10%	50V	
C630	1-126-077-11	ELECT	100uF	20%	63V	

< CONNECTOR >

* CN401	1-573-261-11	PIN, CONNECTOR 2P		
* CN402	1-573-261-31	PIN, CONNECTOR 2P		
* CN501	1-573-261-21	PIN, CONNECTOR 2P		
* CN502	1-573-261-41	PIN, CONNECTOR 2P		
* CN601	1-569-993-11	PIN, CONNECTOR (PC BOARD) 6P		
* CN602	1-569-997-11	PIN, CONNECTOR (PC BOARD) 10P		
* CN603	1-573-261-11	PIN, CONNECTOR 2P		
* CN604	1-573-262-31	PIN, CONNECTOR 3P		
* CN605	1-573-263-11	PIN, CONNECTOR 4P		
* CN606	1-573-262-41	PIN, CONNECTOR 3P		
* CN607	1-573-262-21	PIN, CONNECTOR 3P		
* CN608	1-573-262-11	PIN, CONNECTOR 3P		
* CN609	1-573-263-31	PIN, CONNECTOR 4P		
* CN610	1-573-263-41	PIN, CONNECTOR 4P		
* CN611	1-573-261-41	PIN, CONNECTOR 2P		

< DIODE >

D401	8-719-987-63	DIODE	1N4148M	
D441	8-719-987-63	DIODE	1N4148M	
D501	8-719-987-63	DIODE	1N4148M	
D541	8-719-987-63	DIODE	1N4148M	
D601	8-719-987-63	DIODE	1N4148M	
D602	8-719-114-61	DIODE	RD10JS-T2B2	
D603	8-719-987-63	DIODE	1N4148M	
D604	8-719-114-27	DIODE	RD4.7JS-B3	
D605	8-719-114-27	DIODE	RD4.7JS-B3	
D606	8-719-114-30	DIODE	RD5.1JS-B2	

< IC >

IC401	8-759-900-72	IC	NE5532P
IC402	8-759-900-72	IC	NE5532P
IC403	8-759-900-72	IC	NE5532P
IC404	8-759-900-72	IC	NE5532P
IC405	8-759-053-07	IC	OP-27GP
IC501	8-759-900-72	IC	NE5532P
IC502	8-759-900-72	IC	NE5532P
IC503	8-759-900-72	IC	NE5532P
IC504	8-759-900-72	IC	NE5532P
IC505	8-759-053-07	IC	OP-27GP
IC601	8-752-356-03	IC	CXD2567M
IC602	8-759-917-18	IC	SN74HCU04N
IC603	8-759-044-10	IC	CXD2562Q
IC604	8-759-233-64	IC	TC74HCU04AF
IC606	8-759-711-18	IC	NJM4556D-D
IC607	8-759-900-72	IC	NE5532P

< COIL >

L403	1-410-971-11	INDUCTOR	10uH
L404	1-410-970-11	INDUCTOR	6.8uH
L441	1-410-970-11	INDUCTOR	6.8uH
L442	1-410-970-11	INDUCTOR	6.8uH
L443	1-410-970-11	INDUCTOR	6.8uH
L451	1-410-970-11	INDUCTOR	6.8uH
L452	1-410-967-11	INDUCTOR	2.2uH
L453	1-410-970-11	INDUCTOR	6.8uH
L503	1-410-971-11	INDUCTOR	10uH
L504	1-410-970-11	INDUCTOR	6.8uH
L541	1-410-970-11	INDUCTOR	6.8uH
L542	1-410-970-11	INDUCTOR	6.8uH
L543	1-410-970-11	INDUCTOR	6.8uH
L551	1-410-970-11	INDUCTOR	6.8uH
L552	1-410-967-11	INDUCTOR	2.2uH
L553	1-410-970-11	INDUCTOR	6.8uH
L601	1-410-970-11	INDUCTOR	6.8uH
L603	1-410-970-11	INDUCTOR	6.8uH
L604	1-410-970-11	INDUCTOR	6.8uH

< TRANSISTOR >

Q401	8-729-203-05	TRANSISTOR	2SK30A-GR3
Q402	8-729-184-53	TRANSISTOR	2SC1845-EA
Q403	8-729-321-35	TRANSISTOR	2SK213
Q404	8-729-307-65	TRANSISTOR	2SJ76
Q405	8-729-224-63	TRANSISTOR	2SK246-BL

AUDIO

Ref.No.	Part No.	Description				Remark
Q441	8-729-900-80	TRANSISTOR	DTC114ES			
Q442	8-729-900-65	TRANSISTOR	DTA144ES			
Q443	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q451	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q501	8-729-203-05	TRANSISTOR	2SK30A-GR3			
Q502	8-729-184-53	TRANSISTOR	2SC1845-EA			
Q503	8-729-321-35	TRANSISTOR	2SK213			
Q504	8-729-307-65	TRANSISTOR	2SJ76			
Q505	8-729-224-63	TRANSISTOR	2SK246-BL			
Q541	8-729-900-80	TRANSISTOR	DTC114ES			
Q542	8-729-900-65	TRANSISTOR	DTA144ES			
Q543	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q551	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q601	8-729-900-65	TRANSISTOR	DTA144ES			
Q602	8-729-620-23	TRANSISTOR	2SC3246-JK			
Q603	8-729-203-05	TRANSISTOR	2SK30A-GR3			
Q604	8-729-203-05	TRANSISTOR	2SK30A-GR3			
Q605	8-729-104-18	TRANSISTOR	2SC3514			
Q606	8-729-141-10	TRANSISTOR	2SA985A			
Q607	8-729-900-65	TRANSISTOR	DTA144ES			
		< RESISTOR >				
R401	1-249-945-11	CARBON	8.2K	1%	1/4W	
R402	1-249-945-11	CARBON	8.2K	1%	1/4W	
R403	1-249-945-11	CARBON	8.2K	1%	1/4W	
R404	1-249-945-11	CARBON	8.2K	1%	1/4W	
R405	1-247-719-11	CARBON	3.3K	5%	1/4W	
R406	1-247-719-11	CARBON	3.3K	5%	1/4W	
R407	1-249-947-11	CARBON	10K	1%	1/4W	
R408	1-249-947-11	CARBON	10K	1%	1/4W	
R409	1-249-941-11	CARBON	5.6K	1%	1/4W	
R410	1-249-941-11	CARBON	5.6K	1%	1/4W	
R411	1-249-941-11	CARBON	5.6K	1%	1/4W	
R412	1-249-941-11	CARBON	5.6K	1%	1/4W	
R413	1-249-929-11	CARBON	1.8K	1%	1/4W	
R414	1-249-929-11	CARBON	1.8K	1%	1/4W	
R415	1-249-929-11	CARBON	1.8K	1%	1/4W	
R416	1-249-929-11	CARBON	1.8K	1%	1/4W	
R417	1-249-461-11	CARBON	18K	5%	1/4W	
R418	1-249-929-11	CARBON	1.8K	1%	1/4W	
R419	1-249-520-11	CARBON	47	5%	1/4W	
R420	1-247-713-11	CARBON	1K	5%	1/4W	F
R421	1-249-947-11	CARBON	10K	1%	1/4W	
R422	1-249-556-11	CARBON	1.5K	5%	1/4W	
R423	1-247-700-11	CARBON	100	5%	1/4W	
R424	1-247-700-11	CARBON	100	5%	1/4W	
R425	1-249-637-11	CARBON	33	5%	1/2W	
R426	1-249-637-11	CARBON	33	5%	1/2W	
R427	1-249-637-11	CARBON	33	5%	1/2W	
R428	1-249-417-11	CARBON	1K	5%	1/4W	F
R429	1-249-465-11	CARBON	47K	5%	1/4W	
R430	1-247-903-00	CARBON	1M	5%	1/4W	
R431	1-249-465-11	CARBON	47K	5%	1/4W	
R432	1-249-606-11	CARBON	180K	5%	1/4W	
R441	1-259-476-11	CARBON	100K	5%	1/6W	
R442	1-249-429-11	CARBON	10K	5%	1/4W	
R443	1-249-439-11	CARBON	68K	5%	1/4W	
R451	1-259-444-11	CARBON	4.7K	5%	1/6W	
R452	1-259-476-11	CARBON	100K	5%	1/6W	
R453	1-249-431-11	CARBON	15K	5%	1/4W	
R454	1-259-464-11	CARBON	33K	5%	1/6W	
R455	1-259-468-11	CARBON	47K	5%	1/6W	
R456	1-259-398-11	CARBON	56	5%	1/6W	
R491	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R501	1-249-945-11	CARBON	8.2K	1%	1/4W	
R502	1-249-945-11	CARBON	8.2K	1%	1/4W	
R503	1-249-945-11	CARBON	8.2K	1%	1/4W	
R504	1-249-945-11	CARBON	8.2K	1%	1/4W	
R505	1-247-719-11	CARBON	3.3K	5%	1/4W	
R506	1-247-719-11	CARBON	3.3K	5%	1/4W	
R507	1-249-947-11	CARBON	10K	1%	1/4W	
R508	1-249-947-11	CARBON	10K	1%	1/4W	
R509	1-249-941-11	CARBON	5.6K	1%	1/4W	
R510	1-249-941-11	CARBON	5.6K	1%	1/4W	
R511	1-249-941-11	CARBON	5.6K	1%	1/4W	
R512	1-249-941-11	CARBON	5.6K	1%	1/4W	
R513	1-249-929-11	CARBON	1.8K	1%	1/4W	
R514	1-249-929-11	CARBON	1.8K	1%	1/4W	
R515	1-249-929-11	CARBON	1.8K	1%	1/4W	
R516	1-249-929-11	CARBON	1.8K	1%	1/4W	
R517	1-249-461-11	CARBON	18K	5%	1/4W	
R518	1-249-929-11	CARBON	1.8K	1%	1/4W	
R519	1-249-520-11	CARBON	47	5%	1/4W	
R520	1-247-713-11	CARBON	1K	5%	1/4W	F
R521	1-249-947-11	CARBON	10K	1%	1/4W	
R522	1-249-556-11	CARBON	1.5K	5%	1/4W	
R523	1-247-700-11	CARBON	100	5%	1/4W	
R524	1-247-700-11	CARBON	100	5%	1/4W	
R525	1-249-637-11	CARBON	33	5%	1/2W	
R526	1-249-637-11	CARBON	33	5%	1/2W	
R527	1-249-637-11	CARBON	33	5%	1/2W	
R528	1-249-417-11	CARBON	1K	5%	1/4W	F
R529	1-249-465-11	CARBON	47K	5%	1/4W	
R530	1-247-903-00	CARBON	1M	5%	1/4W	
R531	1-249-465-11	CARBON	47K	5%	1/4W	
R532	1-249-606-11	CARBON	180K	5%	1/4W	
R541	1-259-476-11	CARBON	100K	5%	1/6W	
R542	1-249-429-11	CARBON	10K	5%	1/4W	
R543	1-249-439-11	CARBON	68K	5%	1/4W	
R551	1-259-444-11	CARBON	4.7K	5%	1/6W	
R552	1-259-476-11	CARBON	100K	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R553	1-249-431-11	CARBON	15K	5%	1/4W	
R554	1-259-464-11	CARBON	33K	5%	1/6W	
R555	1-259-468-11	CARBON	47K	5%	1/6W	
R556	1-259-398-11	CARBON	56	5%	1/6W	
R591	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R600	1-249-947-11	CARBON	10K	1%	1/4W	
R601	1-249-417-11	CARBON	1K	5%	1/4W	F
R602	1-249-417-11	CARBON	1K	5%	1/4W	F
R603	1-249-417-11	CARBON	1K	5%	1/4W	F
R604	1-249-417-11	CARBON	1K	5%	1/4W	F
R605	1-249-429-11	CARBON	10K	5%	1/4W	
R608	1-249-413-11	CARBON	470	5%	1/4W	F
R609	1-249-413-11	CARBON	470	5%	1/4W	F
R610	1-249-413-11	CARBON	470	5%	1/4W	F
R611	1-249-413-11	CARBON	470	5%	1/4W	F
R612	1-249-416-11	CARBON	820	5%	1/4W	F
R613	1-249-415-11	CARBON	680	5%	1/4W	F
R614	1-249-411-11	CARBON	330	5%	1/4W	
R615	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R616	1-247-901-11	CARBON	820K	5%	1/4W	
⚠R617	1-212-887-00	FUSIBLE	180	5%	1/4W	F
R618	1-249-417-11	CARBON	1K	5%	1/4W	F
R619	1-249-417-11	CARBON	1K	5%	1/4W	F
R620	1-249-413-11	CARBON	470	5%	1/4W	F
R621	1-249-401-11	CARBON	47	5%	1/4W	F
R622	1-249-520-11	CARBON	47	5%	1/4W	
R623	1-247-713-11	CARBON	1K	5%	1/4W	F
R624	1-247-713-11	CARBON	1K	5%	1/4W	F
R625	1-247-708-11	CARBON	470	5%	1/4W	
R626	1-247-700-11	CARBON	100	5%	1/4W	
R627	1-247-700-11	CARBON	100	5%	1/4W	
R628	1-247-887-00	CARBON	220K	5%	1/4W	
R629	1-249-433-11	CARBON	22K	5%	1/4W	
R630	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R631	1-219-022-11	FUSIBLE	100	5%	1/2W	
⚠R632	1-219-022-11	FUSIBLE	100	5%	1/2W	
		< TERMINAL >				
T2	1-535-988-11	TERMINAL, TAB				
		< THERMISTOR >				
THP601	1-806-882-11	THERMISTOR, POSITIVE				
THP602	1-806-882-11	THERMISTOR, POSITIVE				
THP603	1-806-882-11	THERMISTOR, POSITIVE				
		< VIBRATOR >				
X601	1-577-685-11	FILTER, CRYSTAL (16MHz)				
X602	1-577-686-11	VIBRATOR, CRYSTAL (45MHz)				

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Ref.No.	Part No.	Description			Remark
*	A-4649-489-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C103	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C104	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-124-584-00	ELECT	100uF	20%	10V
C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-164-346-11	CERAMIC CHIP	1uF		16V
C113	1-164-346-11	CERAMIC CHIP	1uF		16V
C114	1-164-346-11	CERAMIC CHIP	1uF		16V
C115	1-162-806-11	CERAMIC	0.1uF	10%	50V
C116	1-162-806-11	CERAMIC	0.1uF	10%	50V
C117	1-107-169-00	MICA	100PF	5%	500V
C121	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C122	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C123	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C124	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C125	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C141	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C142	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C152	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C153	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C154	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C155	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C156	1-164-346-11	CERAMIC CHIP	1uF		16V
C157	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C158	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C159	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C160	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C161	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C175	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C180	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C181	1-164-346-11	CERAMIC CHIP	1uF		16V
C201	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C202	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD

Ref. No.	Part No.	Description	Remark
C203	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C204	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C205	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	
C206	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C207	1-164-346-11	CERAMIC CHIP 1uF 16V	
C301	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C302	1-125-622-11	CAP, DOUBLE LAYERS 0.10F	
C303	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C304	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C305	1-164-346-11	CERAMIC CHIP 1uF 16V	
		< CONNECTOR >	
* CN101	1-573-276-11	PIN, CONNECTOR 6P	
CN102	1-568-799-11	SOCKET, CONNECTOR 16P	
* CN111	1-569-998-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN112	1-580-001-11	PIN, CONNECTOR (PC BOARD) 4P	
* CN113	1-580-002-11	PIN, CONNECTOR (PC BOARD) 5P	
* CN141	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN201	1-580-007-11	PIN, CONNECTOR (PC BOARD) 10P	
* CN202	1-580-003-11	PIN, CONNECTOR (PC BOARD) 6P	
* CN203	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN301	1-691-464-11	PIN, CONNECTOR 8P	
* CN302	1-691-462-11	PIN, CONNECTOR 6P	
		< DIODE >	
D301	8-719-104-34	DIODE 1S2836	
		< IC >	
IC101	8-752-344-48	IC CXD2501Q	
IC102	8-759-071-79	IC BA6297AFP-T1	
IC103	8-759-040-83	IC BA6287F	
IC141	8-759-055-78	IC TA8407F(EL)	
IC142	8-759-700-43	IC NJM4558M	
IC151	8-759-700-43	IC NJM4558M	
IC152	8-759-700-43	IC NJM4558M	
IC201	8-752-352-93	IC CXD2500AQ	
IC301	8-759-165-54	IC M37451M8-282FP	
IC302	8-759-512-81	IC LH5160N-10L	
		< TRANSISTOR >	
Q151	8-729-901-06	TRANSISTOR DTA144EK	
Q181	8-729-901-01	TRANSISTOR DTC144EK	
Q182	8-729-901-06	TRANSISTOR DTA144EK	
		< RESISTOR >	
R101	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R102	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R103	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R104	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R105	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R106	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R107	1-216-025-00	METAL CHIP 100 5% 1/10W	
R108	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R121	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R122	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R123	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R124	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R125	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R126	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R127	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R128	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R129	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R130	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R131	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R132	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R133	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R134	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R141	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R142	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R143	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R144	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R145	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R146	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R147	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R148	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R149	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R151	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R152	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R153	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R154	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
R155	1-216-093-00	METAL CHIP 68K 5% 1/10W	
R156	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R157	1-216-117-00	METAL CHIP 680K 5% 1/10W	
R158	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R159	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R160	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R161	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R163	1-216-076-00	METAL CHIP 13K 5% 1/10W	
R164	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R165	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R166	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R167	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
R171	1-216-001-00	METAL CHIP 10 5% 1/10W	
R172	1-216-001-00	METAL CHIP 10 5% 1/10W	
R173	1-216-001-00	METAL CHIP 10 5% 1/10W	
R174	1-216-001-00	METAL CHIP 10 5% 1/10W	
R175	1-216-001-00	METAL CHIP 10 5% 1/10W	
R177	1-216-001-00	METAL CHIP 10 5% 1/10W	
R178	1-216-001-00	METAL CHIP 10 5% 1/10W	
R179	1-216-001-00	METAL CHIP 10 5% 1/10W	

Ref. No.	Part No.	Description				Remark
R180	1-216-001-00	METAL CHIP	10	5%	1/10W	
R181	1-216-029-00	METAL CHIP	150	5%	1/10W	
R182	1-216-029-00	METAL CHIP	150	5%	1/10W	
R183	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R184	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R201	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R202	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R204	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R205	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R207	1-216-041-00	METAL CHIP	470	5%	1/10W	
R208	1-216-041-00	METAL CHIP	470	5%	1/10W	
R209	1-216-041-00	METAL CHIP	470	5%	1/10W	
R210	1-216-033-00	METAL CHIP	220	5%	1/10W	
R211	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R212	1-216-037-00	METAL CHIP	330	5%	1/10W	
R213	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R301	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R303	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R304	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R310	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R311	1-216-037-00	METAL CHIP	330	5%	1/10W	
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R313	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R314	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R316	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R317	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R318	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		< VIBRATOR >				
X301	1-577-377-11	VIBRATOR, CERAMIC (10MHz)				
**********						
*	A-4617-993-A	BSL BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C10	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C11	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V	
C20	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C21	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V	

Ref. No.	Part No.	Description				Remark
		< CONNECTOR >				
* CN1	1-564-519-11	PLUG, CONNECTOR 4P				
		< HOLE ELEMENT >				
H11	8-719-987-62	HALL, DEVICE LT140SC				
H21	8-719-987-62	HALL, DEVICE LT140SC				
		< IC >				
IC11	8-759-055-78	IC TA8407F				
IC21	8-759-055-78	IC TA8407F				
		< JUMPER RESISTOR >				
J11	1-216-296-00	METAL CHIP	0	5%	1/8W	
		< RESISTOR >				
R11	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R12	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R13	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R14	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R15	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R16	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R17	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R18	1-216-150-00	METAL GLAZE	10	5%	1/8W	
R19	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R21	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R22	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R23	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R24	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R25	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R26	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R27	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R28	1-216-150-00	METAL GLAZE	10	5%	1/8W	
R29	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
**********						
*	1-646-367-11	D. TRANS BOARD				
		**********				
		< THERMISTOR >				
TH901	1-808-065-11	THERMISTOR, POSITIVE (E, EA)				
TH902	1-808-065-11	THERMISTOR, POSITIVE (E, EA)				
**********						
*	A-4649-423-A	DISPLAY BOARD, COMPLETE				
		**********				
*	4-923-532-01	SPACER, LED				

DISPLAY | L. MOTOR | LINE | OPT

Ref. No.	Part No.	Description	Remark
		< CAPACITOR >	
C801	1-164-159-11	CERAMIC 0.1uF 50V	
C802	1-164-159-11	CERAMIC 0.1uF 50V	
C803	1-164-159-11	CERAMIC 0.1uF 50V	
		< DIODE >	
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D803	8-719-987-63	DIODE 1N4148M	
D804	8-719-913-49	LED EBG5638S (▶)	
D805	8-719-913-47	LED EAA5638S (▮▮)	
		< FLUORESCENT INDICATOR >	
FLD801	1-517-128-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC801	8-759-167-73	IC MSC62408-100GS-V1K	
IC802	8-741-100-48	IC SBX1610-59	
		< TRANSISTOR >	
Q801	8-729-900-45	TRANSISTOR DTC114EF	
Q802	8-729-900-45	TRANSISTOR DTC114EF	
Q803	8-729-900-45	TRANSISTOR DTC114EF	
Q804	8-729-900-45	TRANSISTOR DTC114EF	
		< RESISTOR >	
R801	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R802	1-249-429-11	CARBON 10K 5% 1/4W	
R803	1-247-903-00	CARBON 1M 5% 1/4W	
R804	1-249-441-11	CARBON 100K 5% 1/4W	
R805	1-249-441-11	CARBON 100K 5% 1/4W	
R806	1-249-406-11	CARBON 120 5% 1/4W F	
R807	1-249-410-11	CARBON 270 5% 1/4W F	
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (DISPLAY MODE)	
S802	1-554-303-21	SWITCH, TACTILE (PLAY MODE)	
S803	1-554-303-21	SWITCH, TACTILE (LEVEL FILE)	
S804	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S805	1-554-303-21	SWITCH, TACTILE (DIMMER REPEAT)	
S806	1-554-303-21	SWITCH, TACTILE (DIMMER TIME/MEMO)	
S807	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
S808	1-554-303-21	SWITCH, TACTILE (AMS ⋈)	
S809	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
S810	1-554-303-21	SWITCH, TACTILE (FINE RECALL)	
S811	1-554-303-21	SWITCH, TACTILE (AMS ⋈)	
S812	1-554-303-21	SWITCH, TACTILE (▶)	
S813	1-554-303-21	SWITCH, TACTILE (FINE)	
S814	1-554-303-21	SWITCH, TACTILE (◀◀)	
S815	1-554-303-21	SWITCH, TACTILE (▮▮)	
S816	1-554-303-21	SWITCH, TACTILE (ERASE)	
S817	1-554-303-21	SWITCH, TACTILE (▶▶)	
S818	1-554-303-21	SWITCH, TACTILE (■)	
		< VIBRATOR >	
X801	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
**********			
*	1-646-355-11	HP BOARD	
		********	
		< CAPACITOR >	
C461	1-162-290-31	CERAMIC 470PF 10% 50V	
C561	1-162-290-31	CERAMIC 470PF 10% 50V	
		< CONNECTOR >	
* CN461	1-573-262-11	PIN, CONNECTOR 3P	
		< JACK >	
J461	1-568-519-31	JACK, LARGE TYPE (PHONES) (BLACK:AEP, E, G)	
J461	1-568-519-61	JACK, LARGE TYPE (PHONES) (GOLD)	
**********			
*	1-641-765-11	L. MOTOR BOARD	
		**********	
**********			
*	1-646-371-11	LINE BOARD	
		**********	
		< CONNECTOR >	
* CN472	1-573-263-41	PIN, CONNECTOR 4P	
* CN473	1-573-261-41	PIN, CONNECTOR 2P	
		< DIODE >	
D471	8-719-987-63	DIODE 1N4148M	
		< RELAY >	
RY471	1-515-804-11	RELAY	
**********			
*	1-646-368-11	OPT BOARD	
		*********	
		< CAPACITOR >	
C280	1-126-059-11	ELECT 10uF 20% 50V	

POWER

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN280	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC280	8-749-921-12	IC GP1F32T			
**********					
*	A-4649-709-A	POWER BOARD, COMPLETE			
		**********			
*	4-363-146-00	HEAT SINK, V.OUT			
	7-682-147-15	SCREW, TR			
		< BUS >			
* BUS1	1-566-959-11	BAR, BUS			
		< CAPACITOR >			
C901	1-104-645-91	CERAMIC	1uF	20%	50V
C902	1-107-169-00	MICA	100PF	5%	500V
C921	1-104-642-11	ELECT	6800uF	20%	35V
C922	1-107-169-00	MICA	100PF	5%	500V
C923	1-126-051-11	ELECT	47uF	20%	50V
C924	1-106-343-00	MYLAR	1000PF	5%	200V
C925	1-107-202-00	MICA	10PF	5%	500V
C926	1-126-729-51	ELECT	1000uF	20%	63V
C930	1-162-806-11	CERAMIC	0.1uF	10%	50V
C931	1-104-642-11	ELECT	6800uF	20%	35V
C932	1-107-169-00	MICA	100PF	5%	500V
C933	1-126-051-11	ELECT	47uF	20%	50V
C934	1-106-343-00	MYLAR	1000PF	5%	200V
C935	1-107-202-00	MICA	10PF	5%	500V
C936	1-126-729-51	ELECT	1000uF	20%	63V
C951	1-126-017-11	ELECT	6800uF	20%	16V
C952	1-124-920-11	ELECT	330uF	20%	63V
C953	1-124-473-11	ELECT	1000uF	20%	10V
C955	1-126-303-11	ELECT	3.3uF	20%	50V
C956	1-162-294-31	CERAMIC	0.001uF	10%	50V
C957	1-162-806-11	CERAMIC	0.1uF	10%	50V
C961	1-126-001-11	ELECT	3300uF	20%	10V
C962	1-124-995-11	ELECT	220uF	20%	10V
C963	1-124-999-11	ELECT	2200uF	20%	10V
C971	1-126-063-11	ELECT	100uF	20%	63V
C972	1-126-060-11	ELECT	22uF	20%	50V
C973	1-126-052-11	ELECT	100uF	20%	50V
C974	1-126-052-11	ELECT	100uF	20%	50V
C975	1-107-169-00	MICA	100PF	5%	500V
C976	1-107-169-00	MICA	100PF	5%	500V
C977	1-107-169-00	MICA	100PF	5%	500V
C979	1-106-343-00	MYLAR	1000PF	5%	200V
C980	1-104-645-91	CERAMIC	1uF	20%	50V
C981	1-162-806-11	CERAMIC	0.1uF	10%	50V
		< CONNECTOR >			
* CN921	1-573-863-21	PIN, CONNECTOR (PC BOARD) 4P			
* CN922	1-573-262-21	PIN, CONNECTOR 3P			
* CN923	1-573-262-31	PIN, CONNECTOR 3P			
* CN924	1-573-263-11	PIN, CONNECTOR 4P			
* CN925	1-573-262-41	PIN, CONNECTOR 3P			
* CN931	1-573-866-21	PIN, CONNECTOR (PC BOARD) 7P			
* CN932	1-573-261-11	PIN, CONNECTOR 2P			
* CN933	1-573-265-11	PIN, CONNECTOR 6P			
* CN934	1-564-341-51	PIN, CONNECTOR 7P			
* CN935	1-573-261-11	PIN, CONNECTOR 2P			
		< DIODE >			
D921	8-719-210-29	DIODE	F10P10Q		
D922	8-719-210-29	DIODE	F10P10Q		
D923	8-719-114-49	DIODE	RD7.5JS-B2		
D924	8-719-114-75	DIODE	RD13JS-T2B2		
D931	8-719-210-29	DIODE	F10P10Q		
D932	8-719-210-29	DIODE	F10P10Q		
D933	8-719-114-49	DIODE	RD7.5JS-B2		
D934	8-719-975-85	DIODE	ERB83-004		
D951	8-719-975-85	DIODE	ERB83-004		
D952	8-719-975-85	DIODE	ERB83-004		
D953	8-719-975-85	DIODE	ERB83-004		
D954	8-719-975-85	DIODE	ERB83-004		
D961	8-719-200-02	DIODE	10E2		
D962	8-719-114-61	DIODE	RD10JS-T2B2		
D971	8-719-200-02	DIODE	10E2		
D972	8-719-115-15	DIODE	RD33JS-T2B2		
D973	8-719-114-49	DIODE	RD7.5JS-B2		
		< IC >			
IC921	8-759-602-01	IC	M5220P		
IC951	8-759-071-48	IC	M5F7807L		
IC952	8-759-231-53	IC	M5F7805		
IC953	8-759-636-16	IC	M51957AL		
		< JACK >			
J471	1-568-101-11	JACK, PIN 4P (LINE OUT)			
		< IC LINK >			
⚠PS921	1-532-685-00	LINK, IC			
⚠PS931	1-532-685-00	LINK, IC			
		< TRANSISTOR >			
Q921	8-729-203-05	TRANSISTOR	2SK30A-GR3		
Q922	8-729-107-53	TRANSISTOR	2SC2275A		

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER SW TIMER VR

Ref.No.	Part No.	Description				Remark
Q931	8-729-203-05	TRANSISTOR	2SK30A-GR3			
Q932	8-729-141-10	TRANSISTOR	2SA985A			
Q961	8-729-924-90	TRANSISTOR	2SB1370-EF			
Q971	8-729-140-96	TRANSISTOR	KSC1008			
		< RESISTOR >				
R470	1-249-637-11	CARBON	33	5%	1/2W	
R471	1-247-700-11	CARBON	100	5%	1/4W	
R570	1-249-637-11	CARBON	33	5%	1/2W	
R571	1-247-700-11	CARBON	100	5%	1/4W	
⚠R901	1-212-976-00	FUSIBLE	56	5%	1/2W	
R921	1-249-520-11	CARBON	47	5%	1/4W	
R922	1-247-713-11	CARBON	1K	5%	1/4W	F
R923	1-247-713-11	CARBON	1K	5%	1/4W	F
R924	1-247-716-11	CARBON	1.8K	5%	1/4W	
R925	1-247-716-11	CARBON	1.8K	5%	1/4W	
R926	1-247-700-11	CARBON	100	5%	1/4W	
⚠R927	1-212-994-00	FUSIBLE	330	5%	1/2W	
R931	1-249-520-11	CARBON	47	5%	1/4W	
R932	1-247-713-11	CARBON	1K	5%	1/4W	F
R933	1-247-713-11	CARBON	1K	5%	1/4W	F
R934	1-247-716-11	CARBON	1.8K	5%	1/4W	
R935	1-247-716-11	CARBON	1.8K	5%	1/4W	
R936	1-247-700-11	CARBON	100	5%	1/4W	
R951	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R952	1-215-459-00	METAL	39K	1%	1/6W	
R953	1-215-449-00	METAL	15K	1%	1/6W	
R961	1-259-421-11	CARBON	510	5%	1/4W	
R971	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R972	1-249-433-11	CARBON	22K	5%	1/4W	
R973	1-249-433-11	CARBON	22K	5%	1/4W	
		< THERMISTOR >				
TH903	1-806-882-11	THERMISTOR, POSITIVE				
TH904	1-808-065-11	THERMISTOR, POSITIVE				
TH905	1-808-065-11	THERMISTOR, POSITIVE				
**********						
*	1-641-764-11	SW BOARD				
		********				
		< CAPACITOR >				
C001	1-161-494-00	CERAMIC	0.022uF		25V	
		< RESISTOR >				
⚠R001	1-247-727-11	CARBON	10	5%	1/2W	F
⚠R002	1-247-727-11	CARBON	10	5%	1/2W	F
		< SWITCH >				
S001	1-571-300-21	SWITCH, ROTARY (IN SWITCH)				
S002	1-571-300-21	SWITCH, ROTARY (OUT SWITCH)				
**********						
*	1-646-356-11	TIMER BOARD				
		**********				
		< SWITCH >				
S851	1-570-157-51	SWITCH, SLIDE (TIMER)				
**********						
*	1-646-354-11	VR BOARD				
		********				
		< CAPACITOR >				
C351	1-164-159-11	CERAMIC	0.1uF		50V	
C352	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
* CN351	1-573-267-11	PIN, CONNECTOR 8P				
* CN352	1-569-993-11	PIN, CONNECTOR (PC BOARD) 6P				
		< IC >				
IC351	8-759-962-08	IC BA6208				
		< TRANSISTOR >				
Q351	8-729-900-45	TRANSISTOR DTC114EF				
		< RESISTOR >				
R351	1-249-413-11	CARBON	470	5%	1/4W	F
R352	1-249-417-11	CARBON	1K	5%	1/4W	F
		< VARIABLE RESISTOR >				
RV351	1-241-321-11	RES, VAR, CARBON 10KX3 (LINE OUT/PHONE LEVEL)				
**********						
		MISCELLANEOUS				
		**********				
⚠66	1-558-181-21	CORD, POWER (E, EA)				
⚠66	1-558-568-21	CORD, POWER (AEP, G)				
⚠66	1-751-060-11	CORD, POWER (AUS)				
⚠71	1-569-007-11	ADAPTER, CONVERSION 2P (E)				
⚠72	1-569-008-11	ADAPTER, CONVERSION 2P (EA)				
⚠F991	1-532-284-00	FUSE, TIME-LAG (0.63A) (AEP, AUS, G)				
M001	A-4604-347-A	MOTOR (L) ASSY				
Q932	8-729-141-10	TRANSISTOR 2SA985A				
RV351	1-241-321-11	RES, VAR, CARBON 10KX3 (LINE OUT/PHONE LEVEL)				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
S991	1-572-267-21	SWITCH, PUSH (AC POWER) (1 KEY)	
⚠T901	1-423-461-11	TRANSFORMER, POWER (AUDIO) (AEP, AUS, G)	
⚠T911	1-423-459-11	TRANSFORMER, POWER (E, EA)	
⚠T911	1-423-460-11	TRANSFORMER, POWER (DIGITAL) (AEP, AUS, G)	
⚠VS901	1-526-576-51	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E, EA)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-465-592-11	REMOTE COMMANDER (RM-D891) (GOLD:AEP)	
	1-465-593-11	REMOTE COMMANDER (RM-D991) (BLACK:AEP, E, AUS)	
	1-558-271-11	CORD, CONNECTION (AEP, E, G)	
	1-590-925-31	CORD, CONNECTION (AEP, E, G)	
	3-707-584-01	COVER, BATTERY	
	3-755-832-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH/CHINESE) (AEP, E, EA, AUS)	
	3-755-832-41	MANUAL, INSTRUCTION (GERMAN/DUTCH/ITALIAN/PORTUGUESE) (AEP)	
	3-755-832-71	MANUAL, INSTRUCTION (GERMAN) (G)	
	4-847-802-00	SCREW (BLACK:AEP, E, AUS)	
	4-847-802-11	SCREW (GOLD:AEP)	
*	4-955-666-02	CUSHION (AUS)	
*	4-955-669-02	CUSHION (AEP, E, EA)	
	4-956-945-01	INDIVIDUAL CARTON (EXCEPT FOR AUS)	
	4-956-946-01	INDIVIDUAL CARTON (AUS)	
**********			

Ref.No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-545-09	SCREW +B 3X4	
#2	7-682-664-09	SCREW +PSW 4X14	
#3	7-685-647-79	SCREW +P 3X10 TYPE2 SLIT	
#4	7-685-871-01	SCREW +BVTT 3X6 (S)	
#5	7-682-548-04	SCREW +BVTT 3X8 (S)	
#6	7-682-548-09	SCREW +BVTT 3X8 (S)	
#7	7-682-549-09	SCREW +BVTT 3X10 (S)	
#8	7-682-560-04	SCREW +BVTT 4X6 (S)	
#9	7-682-147-15	SCREW, TR	
#10	7-682-547-09	SCREW +BVTT 3X6 (S) (E, EA)	
#11	7-685-646-79	SCREW, TAPPING	
#12	7-682-551-09	SCREW +BVTT 3X14 (S)	
#13	7-624-106-04	RING, RETAINING E-3	
#14	7-682-144-01	SCREW +P 3X3	
#15	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
#16	7-685-132-19	+ PTPWH (2.6X5)	
#17	7-688-003-12	W 3, MIDDLE	
#18	7-624-105-04	STOP RING 2.3, TYPE -E	

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CDP-X505ES

SONY
SERVICE MANUAL

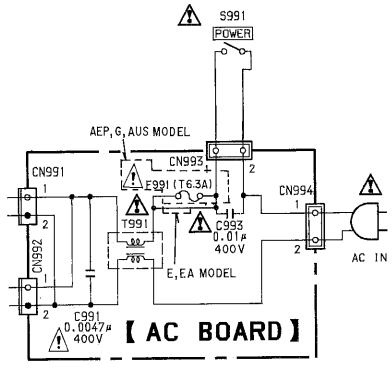
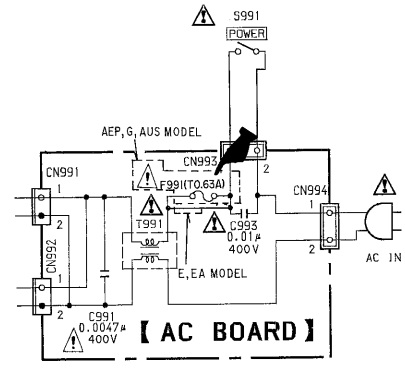
AEP Model
E Model
Australian Model

CORRECTION-1

Correct your service manual as shown below

3-4. SCHEMATIC DIAGRAM — MAIN SECTION — (Page 19)

☛ **: indicates corrected portion.**

INCORRECT	CORRECT
	

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